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How do independent midwives assess the progress of labour?

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How do independent midwives assess the progress of labour?

Clare Winter

2002

University of Dundee

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Abstract

Title: How do Independent Midwives Assess the Progress of Labour

Background: There is very little documentation on how midwives assess the progress of labour. Independent midwives were chosen as the subject group for this study because they work in an environment where there is no demand for written protocols. This situation provides an opportunity to explore what skills if any, midwives use to assess labour, alongside the more formal vaginal examination.

Design: This was a small qualitative study using a grounded theory approach. A purposive sample of 6 of the 32 full time practicing independent midwives were interviewed using in-depth semi-structured interviews. The data was transcribed and analysed using the principles of grounded theory. Ethical approval for this study was secured and informed consent obtained from all participants.

Summary of Categories: 3 main categories emerged from the data: The first was 'knowing', comprising different types of knowledge the midwives used to make decisions. The second physical, signs included various signs displayed by the woman during labour and the third was knowledge of the 'woman in labour'. This last category was based on the relationship that the woman and the midwife had developed during the antenatal period and through labour.

Key Findings: In the absence of prescribed protocols for assessing the progress of labour, midwives develop a rich store of skills and knowledge that assist them in assessing the progress of labour. The foundation of this is the relationship of the midwife with the woman in her care. A model was developed to demonstrate how these three themes are closely entwined.

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Introduction

Background to the Study

Since the establishment of medical men in the area of childbirth, there has been a growing concern that midwifery skills are being lost (Donnison 1988, Marland 1993). These concerns have been expressed at a number of levels, from maternity pressure groups (Beech 1997, Newburn 2002), professional bodies (ARM 1989) and from the government (House of Commons Social Services Committee 1980, DoH 1993). All the documents outline the value of midwifery skills and the need to maintain labour as a life event. Yet the medicalisation of birth continues, which is inseparable from the adoption of modern scientific values (Jordan 1997). The recent government agenda is calling for a multi-skilled professional, providing a seamless holistic service to clients with role expansion leading to greater job satisfaction (DoH 1999). Various groups have expressed concern because midwives will be expected to take more on without considering the fact that there is little time to practice normal midwifery skills let alone take on a wider job description (Schan 1999).

Protocols for assessing the progress of labour were based on the early work of Friedman (1954) and developed further by Philpott & Castle (1972) and Studd (1973). These were recognised as the medical model because women were required to give birth within certain time limits. If these limits are not met, women's labours are accelerated to fit into these parameters (Beech 1999). Within the medical model, the only way to assess the progress of labour is by vaginal examination (VE) (Friedman 1954, Philpott & Castle 1972, Studd 1973 Appendix II, II a, Morrin 1997, Cassidy 1999) and hospital protocols direct that VEs should be used to assess the progress of labour (Garcia & Garforth 1989).

In 1985 a group of self-employed midwives came together and formed the Independent Midwives (IMA 2001). These midwives do not use protocols as such; their practice is guided solely by their Midwives Rules and Code of Professional Conduct (UKCC 1998). Changing Childbirth (DoH 1993) recognised that independent midwives practice was at the cutting edge of midwifery. Uninhibited by hospital policies, their practice was seen to be an example of excellence. Their care generally takes place in the woman's home, providing midwifery for homebirth and water birth, catered to the choices made by the woman and her partner (IMA 2001). Whereas hospital based midwives conform to the medical model and rely on technology and procedure. (Beech 1997, Davis - Floyd & Sargent 1997, Heagerty 1997). Working with the obstetric model, they tend to neglect the woman's contribution the birth process (Garcia & Garforth 1989, Davis-Floyd 1992).

Aims of the Study

The aims of this study are to explore independent midwives practice, focusing particularly on the ways in which they assess the progress of labour. Within the NHS, the traditional way to assess labour is by regular VEs and the results are then plotted against a line of expected progress (Garcia & Garforth 1989). There is no evidence to support the accuracy of this procedure and studies have shown that the intimate invasiveness of VEs may be responsible for mental anguish as well as physical discomfort for the woman in labour (Clements 1994, Devane 1996).

From personal experience as an independent midwife, it is possible to care for a woman in labour and know that labour is progressing without having to perform any VEs. The question is, how does a midwife 'know' labour is progressing? Is it intuition, a 'gut feeling' (Pyles and Stern 1983)? Alongside expertise and knowledge (Benner 1982) with reflection on practice (Schön 1987) that provides the practitioner with insights into to the dynamics of labour?

Very little research has been carried out on the nature of midwifery skills and independent midwifery practice. The medical model employed in hospital practice and fear of litigation impact on practice in the NHS resulting in midwives conforming to protocols (Beech 1997, Heagerty 1997, Shallow 2001b). Independent midwives have a relationship with the woman they are looking after based on trust, it is partnership between the midwife and the woman, both contributing to the process of labour. This group of midwives provide a rich body of knowledge that has yet to be explored.

Aims and Objectives of the Study:

- To explore the ways that independent midwives assess the progress of labour.
- To explore the boundaries used by independent midwives use to assess labour.
- To identify the skills independent midwives use to assess the progress of labour.
- To identify the types of knowledge used by independent midwives such as intuition, reflection.

Summary of the Research Process

This dissertation is exploratory in nature based on a qualitative, grounded theory approach. Grounded theory seeks to find what theory accounts for the research situation as it is. It is intended to generate a theory that will explain patterns of behaviour. This methodology is often used where little or no research exists (Strauss & Corbin 1998). It seemed appropriate to this study since there has not been any research that looks at how independent midwives assess the progress if VE's are not used.

The data was collected by in depth semi-structured interviews with 6 independent midwives using a tape recorder. Purposive sampling was employed as this enables the researcher to select participants because of what they may add to the study (Strauss &

Corbin 1998). An example of case notes was collected from each respondent to identify how the progress of labour is documented. The recorded interviews were transcribed and themes allowed to emerge from the data.

The background has been separated into two main areas. One section provides a brief historical account of how midwifery skills have been marginalized over the years (Donnison 1985, Heagerty 1997) and the second section refers the early research that established the parameters of the length of labour for the medical model (Friedman 1954, Philpott & Castle 1972, Studd 1973).

The results and discussion have been combined since each theme brought up a number of issues pertinent to that section. A model of how independent midwives assess the progress of labour was identified as well as how this assessment process is disrupted. Many of the elements of this model were found to have characteristics that could be explained through Chaos Theory (Lorenz 1963).

Significance and Limitations of the Study

This is a unique study highlighting many of the skills and interactions used by midwives to assess the progress of labour and the findings could be used for further research. The limitation of this study is that it is small scale and uses an exceptional minority of midwives. Whilst the number are small, they represents 18% of the whole population of independent midwives registered with the IMA in 2001 (IMA 2001), which would be considered a good representation for the whole group. For this reason, this study cannot be generalised to other populations of midwives.

Background

Definition of a Midwife

The International Confederation of Midwives (ICM) first adopted the formal definition of a midwife in 1972 and it was amended by the ICM in 1990 and finally approved by the World Health Organisation (WHO) in 1991 and the International Federation of Gynaecologists and Obstetricians (FIGO) in 1992.

'A midwife is a person who, having been regularly admitted to a midwifery educational programme, duly recognised in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and/or legally licensed to practice midwifery' (ICM, 1990).

'She must be able to give the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period, to conduct deliveries on her own responsibility and to care for the new born and the infant. This care includes preventative measures, the detection of abnormal conditions in mother and child, the procurement of medical assistance and the execution of emergency measures in the absence of medical help. (ICM, 1990).

Training of Midwives

There are currently 2 pathways to become a midwife in the UK, both of which must take place at an approved educational institution. For those already registered on part 1 or part 12 of the Register, an 18 months training is recognised which will lead to midwifery registration. The second means of access is the direct entry pathway that consists of 3 years training at university. Completion of these programmes results in the person being registered on part 10 of the register (UKCC, 1998). All the midwives included in this study are therefore registered midwives who have attended an approved educational training and are currently registered on part 10 of the register in accordance with the Midwives Rules (UKCC 1998). The Nursing and Midwifery Council (NMC) superseded the UKCC in April 2002. This body continues to maintain the register that lists all nurses, midwives and

health visitors and sets standards and guidelines for nursing, midwifery and health visiting education as well professional standards (NMC 2001).

Brief History of Midwifery Practice

Midwifery has been practiced for thousands of years. Biblical references from 2000BC show midwives to be preservers of life (Exodus 1:15-21). Throughout history, midwives have been identified as the guardians of normal childbirth. Their knowledge of women's health has often been mystical, working with nature and concerned with matters not understood by men. If a midwife had a good reputation, she could earn a reasonable living, her knowledge gaining her respect within her community. Where this trust had been disrupted in some way, either by a bad reputation or her knowledge seen as a threat by the dominant power, she could find herself burned to the stake for being a “witch” (Donnison 1988, Marland 1993).

The 17th century saw the beginning of the male doctor entering the birthing room and the introduction of tools in childbirth. The gradual medicalisation of childbirth has been documented extensively in the literature (Oakley 1976, 1984, Roberts 1981, Rothman 1982, Towler & Bramall 1986, Donnison 1988, Garcia et al 1990, Davis-Floyd 1992, Marland 1993, Davis - Floyd & Sargent 1997, Heagerty 1997). These writers identify how the focus of the midwife has slowly been redirected away from the birthing mother towards achieving a healthy baby as the product rather than the experience on the mother and family as a whole. This has influenced how current antenatal care and intrapartum care is provided. Medical knowledge gradually changed the culture by wooing women to depend on scientific knowledge (Rothman 1982, Donnison 1988, Davis - Floyd & Sargent 1997).

Before the 1600s there was little regulation of midwives in England. Working class, lay midwives within their own community, practiced midwifery; skills for assessing the progress of birth were passed from mother to daughter without formal instruction. The first great changes in midwifery occurred in the 19th and 20th century. Three main groups influenced these; the rise of professionalism brought that about the elevation of doctors, while midwives increasingly fell under the control of doctors and women in turn, were influenced by the doctors, the emerging popular press and compliant midwives (Donnison 1988, Tew 1995).

In England the 1902 Midwives' Act change midwifery forever. The act provided the opportunity to reform the practice of midwifery and led to changes in the relationship between the midwife and the woman. The Act made it a legal offence for anyone other than a midwife or doctor to attend a birth (Rhodes 1995). Registration became compulsory and midwives were also subject to local authority supervision, which in the past was usually associated with local tradesman. The private lives of midwives were open to scrutiny with the risk of being removed from the list if not met with approval (Donnison 1988). There was now greater control over who should become a midwife and what instruction they should be given. They were not regulated by their own profession but by doctors, who had the dominant voice in their government. Obstetricians provided the training for midwives; they decided what knowledge and skills midwives should be taught (Oakley 1976, Donnison 1988, Tew 1995, Heagerty 1997).

During this time midwives were still practicing independently, though some had become salaried by local supervising authorities, general practitioners and other organisations. The 1936 Midwife's Act required all local supervising authorities to provide a salaried midwifery service, by 1936 hospital births had grown from 15% to over 34% (Donnison 1995).

Despite the offer of a secure salary, by 1942 there were still 2000 of the 15000 qualified midwives practicing independently. This number continued to decline after the inception of the NHS in 1948 (Towler & Bramall 1986, Hunter 1998). Midwifery leaders were influenced by obstetricians and weaned from philosophy of non-intervention; the lure of regular pay and predictable hours was seen as compensation for erosion of independence and loss of continuity of care (Towler & Bramall 1986, Donnison 1988, Tew 1995).

By the early 1950s the maternal mortality rates had reduced dramatically and medicine claimed most of the credit. On closer inspection of the statistics however, it was revealed the fall in the death rate was more likely due to better living conditions and a greater understanding of the control of infection (Rhodes 1995, Tew 1995). Further scrutiny of the results by Marjory Tew demonstrated that those areas with higher hospital birth rates were not the ones with the lowest mortality. Appropriate intervention was seen as life saving but many interventions were inappropriate with disastrous results (Tew 1995, Rhodes 1995). Later it was established that the place of confinement did have an effect on the safety of childbirth but it had been opposite to what the obstetricians claimed (Tew 1995).

The position of the midwife as guardian of birth continued to decline through the 50s and 60s. Obstetricians were increasingly seen as carrying more authority and by 1968, 78% of births took place in the hospital environment. Doctors were seen as providing the best service, so community antenatal clinics were closing because more people were choosing the 'safer' hospital option. (Towler & Bramall 1986, Rhodes 1995). After 1964 the birth rate dropped significantly. Consequently there was a need to consider the future of the domiciliary midwifery service and the need for beds for the increasing number of women in hospital (Marland 1993, Tew 1995, Davis - Floyd & Sargent 1997).

During the late 1960, a committee led by Sir John Peel made a number of recommendations and supported the trends already in progress without having any evidence to substantiate these proposals. It went further to recommend 100% hospital birth and that small obstetric units should be closed, centralising all care in larger hospitals (Ministry of Health 1970). This all had implications for midwifery practice, ancient skills were being lost because they no longer followed the principles of non-intervention, students could not learn from more experienced midwives (Tew 1995, Taylor 2000). The report pointed out that there would be less choice for women of where to give birth and less control on how the process took place (Ministry of Health 1970).

The Short Report (House of Commons Social Services Committee 1980) was set up to look into perinatal mortality because of mounting public concern. It was found in retrospect that much of the material presented to the committee had been provided by experts who were more loyal to the interests of their profession than providing factual evidence (Rhodes 1995, Tew 1995). Once again, the medicalisation of birth was endorsed; supporting the recommendations of the Peel Report (Ministry of Health 1970) and the misuse of still birth rate statistics resulted in the decision to move all obstetric care into larger regional centres where the best equipped facilities were. One suggestion made by the committee is that a more humanising obstetric approach should be used in antenatal clinics and labour wards and that women should be allowed to have a layperson to support her through labour (House of Commons Social Services Committee 1980). A follow up report found that there was still room for improvement and that better use could be made of midwifery skills since midwives had become little more than obstetric nurses (House of Commons Social Services Committee 1984, Kitzinger 1991, Hunter 1998)

People were lead to believe that hospital provides a safer place to give birth. The couples were now removed from their own environment and came to hospital where they fell under the watchful eye or normalising glance of the medical profession (Williams (1997). It is here that the normal limits of pregnancy and birth were established, which permitted the advancement of the medical model. All things could now be measured and monitored against a perceived norm, should they stray from that standard, quick intervention could restore the situation to those set limits, bypassing the woman's inadequate attempt a child birth (Oakley 1976, Beech 1999). Birth was divided in to three stages rather than being viewed as a continuous process that was different for each individual. Defining boundaries of normality set the woman up to fail meeting those standards, which can have long term psychological and physiological implications for the woman (Richards 1978, Williams 1997). It is easy to blame the medical profession for the change in childbirth culture, Jordan (1997) highlights however that these changes are as much the responsibility of the society as a whole. They legitimise what is accepted by society and make way for the official knowledge, she identifies this as authoritative knowledge (Jordan 1997).

Independent Midwifery

During the '70-80s there was a growing awakening among maternity pressure groups and some midwives. The National Childbirth Trust brought to the publics attention the needless intervention occurring in normal labour (Kitzinger 1975) and Janet Balaskas spearheaded the Active Birth Movement encouraging women to be more proactive about their choices around birth (Balaskas 1992). At that time, a group of student midwives met together, many of them direct entry midwives. They were disgruntled at the level of training they were receiving and expressed concerns over what was happening to women in labour, they were no longer content to be thought of as handmaidens to obstetricians and wanted to return to a style of practice that gave them more job satisfaction and greater

autonomy (Donnison 1988, Hunter 1999). Women were now considered to have a pathological condition and labour only considered normal in retrospect, (Flint 1991, Hunter 1998). The group formed the Association of Radical Midwives (ARM) in 1976, their aims were to re-establish the midwife's confidence in her own skills, reaffirm the need of midwives to provide continuity of care and to encourage midwives in their support of woman's active participation in childbirth (ARM 1989).

This group contained a handful of midwives practicing outside the NHS and although they ideologically supported the idea of NHS maternity care, they could no longer work within a system that did not allow midwives to practice their skills to the fullest extent and where there was no possibility of providing continuity of care for the woman through pregnancy, labour and the postnatal period (Flint 1991, Hobbs 1993, Hunter 1999). In 1985, independent midwives founded the Independent Midwives Association (IMA). The aims of the organisation are to support independent midwives in their practice and to lobby for the traditional role of the midwife. Their membership role has never grown beyond 60 members and in 2001 the IMA registered recorded 36 full members and 15 associate members (IMA 2001). A full member is defined by the conditions set out on the application form (Appendix I).

'IMA defines an independent midwife, for the purpose of membership as a registered midwife who is self-employed on either full or part time basis. She is an autonomous practitioner, acting as the woman's advocate in providing individualised midwifery care. Her clinical practice is governed by the UKCC's Midwives Rules, Midwife's Code of Practice and Code of Professional Conduct. She is able to choose her own clients, practice colleagues, working patterns and system of record keeping. She has no geographical boundaries within the UK.' (Appendix I)

'Changing Childbirth' (Department of Health, 1993) recognized that independent midwives practice at the cutting edge of midwifery. Not constrained by hospital policies, their practice was seen to be an example of excellence in midwifery practice. Independent

midwives are committed to providing a holistic model of care (IMA 2001), they believe that birth is a physiological event and their practice is guided by the Midwives Rules and Code of Practice (NMC 2000).

Within the philosophy of care, there is a commitment to power-sharing and client empowerment (Hunter 1999). Cronk (2000) explores the nature of the power relationship between women and their midwives and links it to employment. If the birthing woman employs the midwife, as used to be the case historically and still is the case for independent midwives, the power balance lies in favour of the birthing woman. If however, the midwife is paid and employed by others (NHS Trusts), hospital policies become orders that the woman is expected to follow. As Cronk (2000) relates, the woman and midwife are on equal terms in an adult relationship, each having a responsibility towards the progress of care. Hence, the care independent midwives provide generally takes place in the woman's home, the woman and her family taking an active part in decisions about care. Independent midwives are committed to using traditional midwifery skills caring for a woman in labour rather than resorting to managing the process. They believe their care should reflect the true meaning of the word midwife 'with woman' (Kitzinger 1991, Hobbs 1993, IMA 2001).

In 1994, independent midwives were excluded from professional indemnity because insurance underwriters had identified them as a high-risk category; they refused to renew their insurance at a cost the RCM can afford (RCM 1993). According to Taylor (1999), this has discouraged many midwives from pursuing independent practice and their numbers have remained low resulting in their role as advocates of normal childbirth having less impact on midwifery. Yet despite their small number, independent midwives have spoken out against the implementation of a higher level of practice, they believe they practice at a level that all midwives should be practicing. They have contributed to the debate on

maternity services in the House of Lords and have responded to consultation on establishing the new NMC (IMA 2000, IMA 2001a). They continue to try and resolve the issue over lack of insurance, since no insurance company wants to offer indemnity cover to independent midwives. The situation needs to be resolved because the NMC is planning to introduce a clause in the new code of conduct that all professionals should carry indemnity insurance (IMA 2002).

Assessment of Progress of Labour

Two popular text books in the local university for student midwives are Myles' midwifery, edited by Sweet & Tiran 1997 and Mayes' midwifery, edited by Bennett & Brown 1999. Both books describe assessing the progress of labour in the light of effective uterine contractions and the rate of cervical dilatation (Morrin 1997, Cassidy 1999), 'this is the most exact measurement of progress of labour' (Morrin 1997:379). Other markers of progress include the changing character of the uterine contractions, and the progressive descent of the fetus assessed using regular vaginal examinations (VEs) (Morrin 1997, Cassidy 1999). The procedures are to be carried out with respect and privacy but it is the midwife who diagnoses that the woman is in labour, no mention is made of the woman's contribution to knowing anything about how she is progressing. Cassidy (1999) states that contractions and VEs are an objective measurement of progress where as Morrin (1997) suggests it is a subjective assessment of progress. Cervicographs are recommended by both texts as a graphical representation of progress and the response to deviation from the normal line results in medical intervention (Morrin 1997, Cassidy 1999).

Hospital protocols are prescriptive around assessing the progress of labour; the indicator of the progress of labour is cervical dilatation (Garcia et al 1990). One local hospital suggests that vaginal examination should be performed 2 – 4 hourly in labour and adds 'as

indicated'. It then goes on to suggest the problems are more likely to arise from too few examinations than from too many (Appendix II). The other local teaching hospital employs the following guidelines: 'The purpose of the partogram is to aid recognition of failure of normal progress to occur' and labour is diagnosed if there is progressive cervical dilatation with regular contractions (Appendix II a).

Both protocols identify second stage as the most hazardous stage for the baby and physical observation on the woman are intensified Appendix II, II a). There is no research to support this statement and the prescriptive nature of the protocols give very little consideration for the woman's contribution in the labour and the midwife's ability to assess progress using her own skills. The partogram governs whether progress is normal or not. If these protocols are relatively similar in all institution, it would confirm the fears that midwifery skills are being lost and replaced by obstetric nursing.

Assessing the progress of labour by measuring cervical dilation is strongly supported by the medical model and is the most widely accepted method of assessing progress (Tufnell et al 1989) but there is a lack of evidence to support its accuracy (Crowther et al 1995). For a better understanding of the progress of labour, Simkin and Ancheta (2000) suggest taking into account a number of markers such as the changes in the cervix from a posterior to an anterior position, the softening of the cervix, effacement of the cervix, progressive dilatation of the cervix, and the movements of rotation, flexion, moulding and descent of the fetal head. While focus is on the cervix for progress, little attention is paid to the labouring woman in labour. If the woman were part of the process of labour, then it would seem important to ensure that the woman as an individual was progressing through labour as well as her cervix. The cervix appears to be dismembered from the woman during labour and become the property of the examiner (Bergstrom et al 1992, Clements 1994). VEs

bring up issues over sexual intimacy and the invasion of the woman's privacy (Devane 1996, Warren 1999). To cope with the embarrassment of this procedure midwives develop rituals of sterile procedures and controlling language (Devane 1996). While supporting the use of VEs as an important tool, Warren (1999) encourages midwives to consider carefully why they feel they need to perform one to avoid unnecessary disruption for the labouring woman.

In contrast to the medical model, the holistic or social model of midwifery deploys a wider array of markers of progress. For instance, Baker & Kenner (1993) suggested midwives look at a woman's behaviour during the different stages of labour, McKay & Roberts (1990) speak of maternal sounds during the second stage of labour and Hobbs (1998) describes the purple line that extends gradually from the anus to the sacrum as labour progresses. Munro and Spiby (2000) mention the importance of the abdominal examination but research into these markers seems scarce and they have not been acknowledged as valuable tools to assess the progress of labour. As a result the medical model has had the pre-eminence in assessing the progress of labour (Donnison 1988 Davis-Floyd & Davis 1997 Johanson et al. 2002).

Establishing the Parameters for the Progress of Labour

All the research that has set the parameters for the "normal" progress of labour has come from the medical model (Friedman 1954, Philpot & Castle 1972, Studd 1973, Enkin et al. 1995). Although it has been acknowledged that the early work done on the progress of "normal" labour was severely flawed, no recent research has been put forward to take its place (Enkin et al. 1995).

Friedman (1954) was the first to attempt to set parameters for the progress of “normal” labour and as a consequence has had a major effect on how labour is assessed. His study observed the major events of labour such as strength, length and frequency of contractions and cervical dilation but he decided to focus mainly on dilatation of the cervix with time. The sample was made up of one hundred primigravida who presented themselves early enough in labour to allow him enough time to study them. Five women’s labour was induced, 10 labours were augmented with synthetic oxytocin and 20 women received some type of caudal anaesthetic for pain. Frequent rectal examinations were performed to assess dilatation of the cervix, though not being able to perform examinations more frequently than half hourly affected the slope on his graph during a precipitate labour. He declares that rectal examination was not universally accepted as a proper method of assessing labour at this time. For each labour examination were nearly always performed by one person to reduce variability between examiners. During labours, the membranes were ruptured but no comparison is made between them and those whose membranes were left intact.

Plotting the cervical dilatation on graph paper, Friedman was able to produce an S shaped curve resembling a sigmoid curve that depicted the progress of labour. See Figure 1 below.

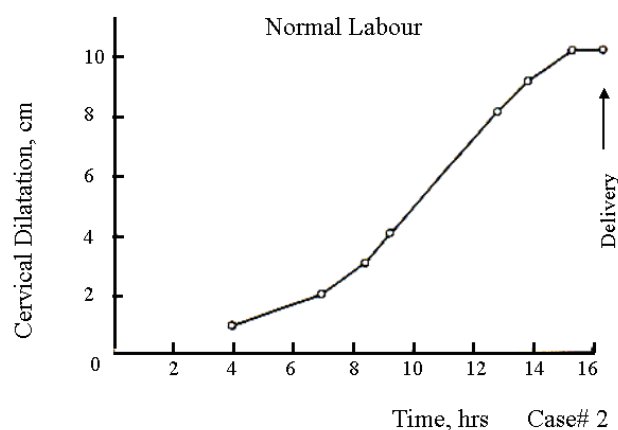


Figure 1. Friedman’s Curve

Adapted from Friedman (1954:1572)

The earlier flattened phase, the latent phase was termed the prodromal period, the woman not really in labour and the time should not be added to the length of labour. During the period between 3-8 cm, cervical dilation is accelerated and is termed the first stage of labour, the active phase. From 3 cm to fully dilated, the cervix dilated at an average of 1 cm per hour. The timing of the second stage was 'left to clinical art' (Friedman 1954:1574).

There are serious problems with the research design although this work has formed the basis of judging the progress of all labours and remains the basis of the medical model. Friedman's sample size of 100 women is very small to represent a whole population. There is no evidence that the women in the study were given any information about what was to happen to them and in the light of women's feelings about vaginal examinations it is doubtful many would have given consent (Bergstrom et al 1992, Devane 1996, Warren 1999).

Furthermore, VEs were performed at the height of a contraction, a particularly painful moment to be compromised by rectal examination (Bergstrom et al 1992). In his sample, Friedman included women who were given synthetic oxytocin, which would speed up dilatation and affect average duration of dilatation (O'Driscoll 1975). The women experienced having their membranes ruptured, this is also known to increase the speed of dilatation (O'Driscoll 1975). Conversely, he included women having spinal anaesthesia, which he notes slows the process of dilation.

Building on Friedman's (1954) cervicograph, Philpott & Castle (1972) added an alert line. From their work in Rhodesia with African women, they noticed that the main obstetric problems that presented were cephalopelvic disproportion (CPD - disproportion between the fetal head and the pelvis, the head cannot enter the pelvic brim) and insufficient uterine contractions. They state that all primigravida are a 'trial of labour' (Philpott &

Castle 1972:592), therefore all labours are regarded as abnormal and can only be seen as normal after the event. Philpott & Castle's clinical study established a set of guidelines based on the cervicograph; they designed an alert line that needed to satisfy two criteria. Firstly, it had to be simple to use and secondly it had to separate the majority of normal 'patients' from abnormal so there is time to transfer the 'patient' to the Central Unit.

Using 100 women, they attempted to establish Friedman style curve for African women but say they were unable to define when labour started, giving no reason for not knowing when labour started. Once again, the sample size was too small to obtain meaningful statistics. They also discovered that the active phase slope of the curve was more shallow than those of American women and they note that the fetal head does not engage in African women till late first stage and that they are also more likely to experience a degree of mild CPD. The method they employ for their study was very vague. It is difficult to make out how they decided any parameters for their alert line. Despite the confusion, they managed to define the Alert Line that is 'simple and effective' on a group of 624 primigravida (Philpott & Castle 1972:595) but with no evidence to support how it was developed. They then decided to put in an Action Line that was 'arbitrarily drawn' (Philpott & Castle 1972:595) four hours later, parallel to the Alert Line.

The advantage of the Alert Line was that 'patients' whose cervicographs kept to the left of the Alert Line could be cared for safely in the peripheral units, once the cervicograph moved to the right of the line, there would be enough time to transfer to a large unit where there would be help. Although the research made little sense, the idea is sensible for this context considering the distances some women would have needed to travel to central units. Philpott and Castle go on to conclude that this line be employed in other countries because it is a 'simple guideline' for midwives and doctors in G.P. units, they believed it

had universal application. Their conclusion goes beyond their initial investigation since what drew them to develop an Alert Line was the damage caused by fistulas from prolonged labour and CPD. They did not identify whether the Alert Line was successful in reducing these procedures.

Studd (1973) further developed Philpott & Castle's work on the cervicograph. Studd's study focuses on the introduction of the partogram at the Birmingham Maternity Hospital, where it was used on 15000 labours and shown to 'successfully separate normal labours from labour destined to result in an abnormal outcome' (Studd 1972:451). Other aims of the study were to define criteria of normal labour in the British population and to assess the value of the partogram based on the data obtained from the management of primigravid labours.

The partogram has various regions with room to record time of admission, maternal observations, descent of the fetal head, fluid balance and drug administration and most important of all cervicograph to record dilation. This is seen as the most important part of the partogram. It was decided by Studd that the Action Line identified by Philpott and Castle (1972) should be modified since it would be used on a different population, it was moved four hours to the left because cervical dilation is quicker in this population. Studd does not provide evidence to support his decision.

Findings were that the partogram is much clearer than lengthy note writing, valuable for teaching students and hand over of 'patient from one doctor to another was more precise, 'at-a-glance' (Studd 1973:453); it was possible to see how labour had progressed. Also it was found that graphic records prevented prolonged labours, as the action line could be identified quickly. There is no evidence of how these findings were evaluated, it would seem

that partograms excluded the need to communicate with the woman in labour because all her details were before the doctor.

Studd defined normal labour as:

‘One in which the patient was admitted in labour requiring no induction or oxytocic stimulation, had no lumbar epidural anaesthesia, did not require instrumental or abdominal delivery, and was delivered of a baby weighing more than 2,500g in good condition’. (Studd 1972:453)

Once again it proved difficult to decide when labour started (Philpott and Castle 1972) so it was ‘decided’ that labour was effectively commenced on admission to hospital. Using the data from 170 normal labours, five cervicographs were developed to represent cervical dilation of normal labour. Depending at what dilation a woman was at when she was admitted would depend on which curve she was assigned to. The curves were commercially manufactured as acrylic stencils and a line of expectation could be drawn on the woman chart. If she ‘strayed’ 2 hour to the right of the line, as long as the fetal presentation was correct she could be augmented with oxytocin.

Studd (1973) concludes that the partogram is able to separate normal from abnormal labour and recommends that the partogram is a major advance in practical obstetrics. It can be seen that no reference is made to how women were recruited and whether any form of consent was gained. It is not clear that augmenting labours is any safer than letting the woman labour for longer. There is no mention of midwife care or midwife skills or whether the women were expected to labour in bed or were ambulatory.

The articles reviewed here are over 25 years old; they were conducted in a time when research criteria were not so stringent and they demonstrate poor research design and findings that are questionable. Yet there is no recent research that looks at how the progress of labour is assessed. A recent paper by Albers (1999) re-examines the duration of

labour in healthy women. She looked at a multicultural population of 2511 women in 9 different midwifery units in America. Midwives provided all care and there were clear inclusion exclusion criteria described. In this low risk population it was discovered that the length of labour was at least twice as long as that identified by Friedman, Philpott and Castle. Although this paper is useful in changing the time parameters of normal labour, there was no focus on how the progress of labour was assessed. VEs were the tool used to assess the progress of labour but they were performed at the discretion of the midwife in order to make a management decision. Albers expresses that there was reluctance from the practitioners to perform unnecessary VE's. No other method of assessing progress was mentioned.

Methodology

Research is defined as a ‘systematic inquiry that uses disciplined methods to answer questions or solve problems’ (Polit et al 2001:9). Polit et al (2001) suggest that research is a way to develop, refine and expand a body of knowledge. Development and application of midwifery knowledge is vital for improvement in client care. Along side their health care professional colleagues, Alexander et al (1993) identify that midwives are increasingly expected to implement research-based practice, by utilizing research findings to support decision-making, actions and interactions with clients. They recommend that research can contribute to better practice as it provides insight into practice and it can also test the effectiveness of care. Research also produces a deeper understanding of concepts to develop new and improved methods of care (Crowe 1982).

Having decided what area to explore, it was important to use an appropriate approach and the correct tools to carry out the specific inquiry. The term ‘methodology’ encompasses assumptions, values and theoretical frameworks involved in the entire research process and the term ‘method’ is the tool or mode of collecting the data (Keddy et al 1996). Generally, two main approaches are identified. Firstly, quantitative methodology is used to survey large populations or to test an experimental hypothesis. Here, the main objective is to find out how many of X there are or to set up an appropriate experiment, to test a refutable hypothesis about the effect of X in a study and control group. In contrast, qualitative methodologies set about inquiring what X is and to put X within a context. Qualitative research strives to find out how people think and feel about the circumstance in which they find themselves (Mays & Pope 1995). A qualitative approach is very useful in exploring aspects of clinical decision making by probing and exploring both the declared and the hidden routines and rules practitioners use (Mays & Pope 1995, Thorne 2000).

Silverman (1994) suggests that quantitative research is rooted in positivism, the focus is on the manipulation of numerical data using statistical procedures, to test a hypothetical statement and look for the presence, strengths and inter-relationships of that statement in specific human and animal populations. This is a deductive research process, as steps are taken to test the hypothesis through empirical experiments that are set up under controlled conditions to find out whether or not the hypothesis is or is not confirmed in the population group (Silverman 1994, Boyatzis 1998) Using a rigorous study design that puts in place mechanism to avoid researcher bias, this approach aims to be value free (Mays & Pope 2000, Bluff 1997).

Jackson (1987) has however, questioned the idea of a neutral observer, since in any study, the researcher chooses the subjects, the instruments and the questions, data can be presented in such a way that the casual onlooker could be misled. Mays and Pope (1995) point out that all research is selective and that it is not possible to capture the whole truth of events so it is possible to give the wrong impression even within the rigors of quantitative research. In addition, numerous debates about bias have been conducted by philosophers of science which suggest that while individual experiments are set up to rigorously test the effect of X, selection of particular questions or “puzzles” is determined by a powerful research paradigm that coordinate and direct the activities of scientists who work within it (Chalmers 1987).

Further criticism has been directed towards qualitative methods for lacking ‘scientific’ rigour (Jackson 1987). He points out that it is more likely to be subjective and open to the researchers bias and lacks reproducibility, which is so highly valued within quantitative methods. Qualitative studies are also criticised for the tendency to produce large quantities of data from characteristically small and therefore “unrepresentative” number of respondents (Jackson 1987). These criticisms can be answered by the researcher paying

attention to issues of validity, reliability and generalisability and giving adequate explanation of the research process, giving reasons for assumptions made and methods used (Mays & Pope 1995).

Qualitative research tends to be holistic and strives for an understanding of individuals (Strauss & Corbin 1998, Lincoln & Guba 1985). It has an inherently flexible design that allows the researcher to systematically adjust during data collection as the emerging information brings up more questions (Strauss & Corbin 1998). The subjective experience is particularly central to some methodology, for example feminist research focuses on the viewpoint that there is no neutral, value free position from which to do research (King 1994). King (1994) argues that it is committed to the diversity of women's experiences, individually and collectively, which contrast strongly with most positivist-empiricist paradigms that encourage the idea that there is a universal reality made up of truths that can be known through rigorous objectivity (Keddy et al 1996).

The methodological approach for dealing with a research question is dependent on the philosophical orientation of the person doing the research (Maykut & Morehouse 1994, Lincoln & Guba 1985). The way the individual perceives the world will affect the manner in which they interpret what they see, hear and learn (Maykut & Morehouse 1994). The focus of this inquiry is how Independent Midwives assess the progress of labour. Is there one reality or are there multiple realities involved in the process? Qualitative research seeks to understand particular phenomena in all their complexities within a specific situation and environment, by using a number of strategies to obtain data (Strauss & Corbin 1998). The data are then carefully inspected to see if patterns emerge and the complexity becomes apparent when attempts are made to explain various interactions (Maykut & Morehouse 1994, Strauss & Corbin 1998). Another aspect to consider is that almost no research has

been conducted on how midwives assess the progress of labour and so the study will be exploratory in nature (Robson 1997). It is with these characteristics in mind that a qualitative approach has been selected for this study.

Design

Having selected a qualitative approach for this study, it would seem a simple task to set about collecting data; however, there are a plethora of designs to the qualitative approach. Miles and Huberman (1994) have identified three approaches to analysis, interpretivism, social anthropology and collaborative social research. The first, which they believe would encompass phenomenological methods emphasising the inherent complexity of humans and the importance of understanding the lived experience of individuals. It does not attempt to theorise but rather to a practical understanding of meaning and actions.

The second approach included ethnographic techniques like grounded theory and a naturalistic inquiry that are used in this study. Here, the researcher's role is to gain a holistic view of subjects under study, multiple data sources are used and the researcher seeks to uncover specific ways in which people work in a particular setting. The focus is on using particular techniques to analyse the data to generate, uncover and refine theoretical statements (Strauss & Corbin 1998). The final approach outlined by Miles and Huberman (1994) is collaborative social research, where the research and participants work together to transform the environment, they act on their world rather than being acted on. This contrasts with quantitative methodologies, where subjects only exist as part of a study, or control group.

It would seem a simple enough exercise to choose the method from the list that best suits the aims of the research; however, even within qualitative approaches there is disagreement

as to which categories each method fits. Lowenberg (1993) classifies phenomenology, ethnography and grounded theory within the interpretivism group and she uses other divisions for grounded theory such as symbolic interaction. Scanning the literature on qualitative methods soon reveals that these processes can be interpreted and carried out in a multitude of ways, which can all seem quite confusing for the novice researcher. Refocusing on the aims and objectives of the study are helpful in finding the most appropriate approach. This study is essentially exploratory in nature (Clifford 1990) and as Robson (1997) suggest, is likely to incorporate elements from a number of strategies within the design, a hybridisation of different qualitative approaches.

Although the research is not aiming to create a theory on how the progress of labour is assessed, it is hoped that the data will reveal a pattern or model that the midwives involved can identify with. Following inspection by other independent midwives, it is possible that this model can be generalised to the way they practice. This is in keeping with some of the aspects of grounded theory developed by Glaser and Strauss (1967) where they suggest that the theory or model that may emerge can explain the behaviours of the area under study. One of the foremost uses of grounded theory is for preliminary exploration into areas where little research has been undertaken, which is pertinent to the present study. Chenitz & Swanson (1986) indicate that investigations using grounded theory can be reported at the descriptive, theoretical or process level. It is because of this flexibility within the method that grounded theory will form the main basis of the method used in this study. On occasion however, it was necessary to depart from the method, this has been discussed later,

The term ‘symbolic interaction’ has been used in grounded theory because it focuses on the meanings of events to people in their every day settings; it therefore incorporates aspects of

phenomenology in that it is concerned with the study of the inner aspects of human behaviour (Chenitz & Swanson 1986). Chenitz & Swanson (1986) identify that the central principle of symbolic interactionism is that a human being has a concept of self and it is that interaction of self with those around them that meanings are formulated and modified. There is an interpretative process used by the person involved in dealing with the issues that person encounters, in this way grounded theory study on interaction provides a method to understand behaviour in different ways (Chenitz & Swanson 1986).

Sampling

Unlike quantitative research, those using qualitative methods are not intending to generalise their findings to the whole population. The samples chosen tend to be purposeful rather than random and may not be a prespecified number of subjects but can evolve once the study begins (Miles & Huberman 1994). In grounded theory, theoretical sampling is employed. In this case, participants are selected because of what they may add to the study; further sampling will take place through out the research so that categories and their relationship and interrelationships can be explored (Chenitz & Swanson 1986). Cutcliffe (2000) argues that the terms purposeful and theoretical can be used interchangeably and acknowledges the confusion these terms cause for the novice researcher. However, he emphasises how important it is for the researcher to justify their choice of sample.

As mentioned previously, independent midwives are small in number. During the time of selection of sample, Sept – Oct 2001, there were 32 full members of the IMA (IMA 2001). Originally, it was proposed that 10 members would be interviewed because they were living in the London area and so easily accessible for travelling. It became clear after the first 6 interviews that an enormous amount of material was being generated and so in consultation with my supervisor, the advice was that the six interviews already gathered

would be sufficient for the present study, since the main categories were saturated (Strauss & Corbin 1998). Despite the small number in the sample, this represents 18% of independent midwives who are IMA members.

Characteristics of the Sample

Six independent midwives, as defined in Appendix I, were interviewed; originally was to interview all the independent midwives in the London area for convenient travel purposes. However, a holiday in the north of England during the interview period gave the opportunity for the independent midwife in that area be purposefully selected because of her experience in midwifery. All members of the IMA are female, as defined by their constitution. Table 1 below summarise the characteristics of the Independent Midwives interviewed, together with their code name, which was used for confidentiality. Names were chosen rather than numbers because these individuals are known to me, where as numbers appear more formal and distant. All code names begin with M because they are midwives.

Table 1. Summary of Characteristics

Code Name	Training	Total years a midwife	Number of years an independent midwife
Meredith	1 year	25	11
Mattie	18 months	20	11
Martha	18 months	13 ½	12
Mary	18 months	8	8
Maggie	3 yr direct entry	3	3
Margi	3 yr direct entry	3	1 ½

Data Collection

Having made a decision to have an open, flexible approach to the study, tools or methods for data collection needed to be identified. To gain a detailed understanding of the world being explored, the qualitative researcher looks closely at people's words, actions and records and attempts to understand the situation as perceived or constructed by the participant (Strauss & Corbin 1998). Having captured these words or actions, the task is then to identify patterns and present these to others in a cohesive form that does not detract or add to the participant's original experience (Maykut & Morehouse 1994).

If the research into this topic were claiming anything other than an exploration into this area, its validity would be greatly increased by using a number of methods. For example, as well as interviewing the subjects, actions could be observed and compared with the individual's accounts of how they assess labour (Silverman 2000). However, due to time constraints, lack of experience in the research process and the various ethical issues involved in gaining the consent of the woman to attend their labour, this option was not pursued. To some degree validity was increased using triangulation by comparing how the midwives said they assessed labour in the interviews with what they wrote in their labour notes (Mays & Pope 2000). The midwives randomly pulled a set of case notes from their store, photostat copies of the accounts of labour were obtained to corroborate what the midwives related in the interview. All evidences of clients' identities were removed to maintain the confidentiality of the client. The notes were examined for evidence of the midwives' using similar terms that were expressed in their interview (see Appendix III). The method chosen for collecting data in this study was using interviews; unstructured interviews are more commonly used when the interviewer does not want to influence the range and depth of the interviewee's responses (Rose 1994). The informant is neither guided nor probed during the interview; this method is often used in phenomenological

studies where the researcher is making inquiry into the participants lived experience (Hunt & Symonds 1995, Rose 1994).

For this situation, semi-structured interviews as defined above by Rose (1994) were chosen for data collection, in that some open-ended questions were designed to act as a means of triggering a response allowing for the interviewer to focus on particular issues if they did not come up spontaneously during the interview (Appendix IV). The list was developed after initial analysis of the first interview but was not necessarily followed religiously at each interview. It merely acted as a prompt which gave the opportunity to clarify comments and probe specific areas, at the same time, the participant still has the freedom to contribute what they feel is important. Rose (1994) identifies this as gentle guidance rather than firm control. If pure grounded theory methodology were being followed, the interviews would become more focused as categories or themes became saturated; however in this instance that protocol was not followed, since all the interviews were conducted before the first interview was fully analysed. The difficulty with this approach was that some categories were not fully saturated.

Strauss & Corbin (1998) respond to a question as to whether it is possible to use data that has already been collected. They acknowledge that researchers will use the grounded theory process to different degrees depending on time limit and resources. They suggest that using data already collected is not dissimilar to secondary analysis and that earlier data should be approached first for significant happenings or event. The problems that occur with already collected data is that it is difficult to saturate categories or find variations because there is not enough data. At this point, it would be necessary to collect more data to update the material, but in this case, although possible, there was not enough time, this may produce gaps in the theory. Despite the small number of participants and the time

restrictions imposed on the study, it is likely that from the data a model will emerge that demonstrates some of the concepts of how independent midwives assess the progress of labour.

From a qualitative perspective, interviews give the researcher access to data that represents people's insight to their world; it cannot provide the kind of scientific 'truth' that many positivists strive for (Chalmers 1987, Silverman 1994). The purposes of the interview from an interactionist's point of view is to try and capture elements of the participant's world and draw them into the study. In order for the interviewee to part with some of their world, the participants need to feel safe about what they are sharing, neither should they feel that what is shared is being consumed, or extracted just for the sake of the study. In a sense they are giving part of their lives, which will be interpreted by someone else (Maykut & Morehouse 1994)

All the participants expressed their eagerness to be involved in the study, they are all known to the researcher as colleagues and peers. As Rose (1994) comments, this facilitated a relaxed and informal interview environment with room for flexibility. This advantaged position of trust however, is open to bias and subtle influences by the interviewer, there may be reluctance by the participants to completely reveal all aspects of their practice (Sorrell & Redmond 1995). It is possible that this effect was minimised since the data collected would not be incriminating in nature and confidentiality was assured as explained through signing a consent form (Appendix V). As far as the researchers own biases and values are concerned, it was not clarified with the interviewees if they were aware of wanting to relate experiences to meet the researchers expectations. During the interviews however, they were given room to offer opinions as well as talk about their practice, this was intended to provide an environment where they felt free to talk openly.

This avoided being drawn into the conversation and allowed the employment of listening skills as suggested by Rubin & Rubin (1995).

There are a number of advantages in using interviews over other methods of data collection. In this particular case, it gave access to peoples thoughts and ideas in their words; allowed for clarification of meanings and offered the interviewee's the opportunity to be actively involved in formulating the research project (Rubin & Rubin 1995, Silverman 1994).

Equipment

An Aiwa TP-650 tape recorder was used with two new AA batteries, two spare batteries were available at each session, and the interviews were recorded on Sony FX 90 minute tapes. Interviews lasted between 35 – 60 minutes. Each participant was shown how to stop the tape if they wanted to at any point during the interview and a small test run was performed to ensure the tape was working properly and the microphone was positioned well. The interviews took place in the participant's own home at their convenience, here they were on familiar territory, although more vulnerable to familiar disturbances such as phone call, visitors or childcare commitment. Even though these situations occurred occasionally, they seemed to be taken as part of the whole event and did not appear to disrupt the flow of the interview. This may have been facilitated by spending time prior to the interview talking and becoming familiar with each other's company. . During the interview key words were noted and reflected back to the interviewee to either clarify or probe a particular issue more deeply.

There were disadvantages associated with being well known to the respondents. It was assumed that the researcher understood terms such as 'autonomy' and 'woman centred

care', where as an outsider may have sought to clarify meanings, on occasions the respondent was asked to explain this terms if it was felt there may be ambiguity. During some of the conversations before an interview, the researcher became privy to recent developments in the individuals midwifery practice and during the interview, references were made to these incidences. These were only alluded to during the interview, so using field notes some of the quotes used in the data analysis have been further supported and clarified using field notes as suggested by Strauss & Corbin (1998).

Ethical Considerations.

Department of Health Guidelines specify that any research that involves human participants and accessing client's records must be passed through an ethics committee before the study commences (Field 2000). Ethics committees were first developed in the UK in the 1960's, as a rule they consist of lay members, legal and health professionals (Field 2000). Their main aims developed from the Nuremberg Code are there to ensure that ethical standards are maintained; protect the research subjects are protected from harm; ensure that the research subjects' rights are preserved and that the researcher is not subjected to unjustified criticism (Cluett 2000). An application form for South Bank University ethics committee was submitted with a copy of the research proposal and a letter of consent to interview (Appendix VI) and consent form (Appendix V), after it was considered, the proposal was accepted with a few minor spelling amendments to be made to the letters.

The expectations of the ethics committee seem to be based on utilitarian views, as it tends to have a more scientific stance. It addresses the recruitment of respondents by consent form, the carrying out of interviews so as to avoid harm to others and makes every effort to ensure that confidentiality is maintained. Informed consent strives to give a full

explanation of what the study will involved, however, as Archbold (1986) points out, it is not possible to foresee all the issues involved at the beginning of the project and revealing the details of the study may influence the subjects' responses. In considering the question of harm, how likely is it that this study will cause harm, as Miles and Huberman (1994) point out, what is harm? It could be that someone's self esteem is hurt or they are made to look foolish. Although all the requirements of the ethics committee were adhered to, there was a sense of reciprocity between the participants and the researcher, both research and respondent were on an equal footing (Rew et al 1993).

Confidentiality

It was explained to each of the participants that confidentiality would be maintained, even though some of the respondents expressed they did not feel the need of it. Confidentiality is concerned with what will be done with the data collected, tapes and transcripts (Bluff 2000). All names were removed from the transcripts; only my supervisors and myself had access to the data, the participants only identified by code names. The interview tapes were stored securely and have to be destroyed six months after the project. At the start of the interview, it was explained to each of the respondents that should any issues of practice arise or they should disclose any harmful behaviour, they would be refer to a Supervisor of Midwives who was prepared to be available for clinical issue (UKCC 1998). Although this situation did not occur, it potentially placed the researcher in a difficult position because a decision would have to be made as to what to do with this information (Miles & Huberman 1994).

The participants were also asked to provide examples of their case notes. The intention was to use them to triangulate their account on how they assess the progress of labour (Strauss & Corbin 1998). Their written account was compared with their verbal account for

consistency, and example has been included in Appendix III. Once again, strict attention had to be paid to anonymity to protect the identity of the client, personal detail and names and addresses were not made available to me. The Data Protection Act 1984 gives people the right to access of any information held on computer about them, although the respondents names were removed from the transcripts, they were offered the opportunity to read the transcript once they were finished, this would also help with validity.

Pilot Study

Robson (1997) suggests that the advantage of carrying out pilot interviews is to familiarise the research with the procedure. He goes on to say that it gives an opportunity to become familiar with the equipment and be aware of some of the difficulties that might be encountered with the data collection process. It would also provide an opportunity to experience the length of the interview and whether the question prompts are suitable (Robson 1997). The first interview was used as a pilot interview to check the equipment and becoming familiar with the data, this helped provided insight to the process of identifying themes and helped to quell the fears that the vast quantity of data would never yield to analysis.

Data Analysis

All the data was collected using semi-structured interview and the audiotapes were transcribed personally using a common word processing package on a personal computer. This provided opportunity to copy, paste, and insert comments, memos and notes at different points using identifiable fonts. It also makes coding easier since a word search could be performed to identify a particular code, theme or piece of text. Hard copies were easily printed out and worked on; any additional information could be added to the notes

made about the coding process. Backup copies were kept on a 100MB zip disc, however, not always kept strictly up to date.

Transcribing process, although very time consuming, gave the opportunity to become immersed in the data (Glaser & Strauss 1967). The procedure was greatly helped by using headphones and a tape recorder with an on-off foot pedal. Difficulties arose during transcription in trying to decide where punctuation should be inserted and how to spell words such as um and err, and whether it was an important part of the analysis or not. Another issue that was considered was voice intonation, some comments were clothed in sarcasm or surprise and it is difficult to assess how this may have affected the interpretation of the text (Maykut & Morehouse 1994). As the analysis progressed, it became obvious that those issue, although should be acknowledged, had only a small affect on the data. The themes that were finally established appeared to transcend those ambiguities.

Codes and Categories.

For the novice, the terminology related to coding is confusing, the same word can mean something different to another person, for that reason an attempt will be made to clarify terms. Miles and Huberman (1994) identify a code as a label or tag to the word or piece of text is has been assigned to. It therefore suggests that some sort of analysis has taken place already but the difficulty for the novice is how do they know that the tag used is what the person is saying. Boyatzis (1998) describes how the hunters in the Kalahari desert find their prey, an outsider could be forgiven for thinking their skills were magical, others might say they were intuitive but on further contact and observation, it is revealed that by using their past experience of hunting they are able to interpret the patterns or clues left by the animal they are tracking. This provides a key for understanding coding, even the novice can discern patterns within the text, this then began the analysis process and over time, after

much immersion in the data (Strauss & Corbin 1998), it was possible to classify or encode the patterns. As the data was being coded, categories began to emerge, these were able to be rationalised further the analysis progressed (Boyatzis 1998).

Lincoln & Guba (1985) describe two types of codes, one emerges from the terms used by the respondents and the other is constructed by the analyst whilst working with the data. In this case both strategies were used. For example within the theme of 'physical signs', the codes were identified from what the respondents described as the signs they identified to assess the progress of labour. Whereas many of the codes identified under the theme 'woman in labour' were constructed during the analysis. That was because they were only evident after examining the context of the data. Codes represent concepts derived from the data, they have the potential to explain the phenomena under investigation and begin to build models or theories that are able to predict events (Strauss & Corbin 1998).

Thematic analysis was best suited for the data, Boyatzis (1998) outline three phases in this inquiry, the need to recognise an important moment which then has to be identified as something which can then be interpreted. The process is very time consuming and there are issues concerning the comparison of one person's words with another. Is it possible to compare what one person has said the same as another, different terms have been used to describe the same situation, and can it be assumed that the same meaning was intended? As recommended by Burnard (1991) and Miles & Huberman (1994), for the purpose of this study it understood that it could be so.

Initially open coding was used on the data; this process discovers concepts and opens the text up to the meanings contained within it (Strauss & Corbin 1998). The transcripts were coded by circling words and phrases within the text and marking them with code words. Comparisons were made for similarities and differences and descriptions, events and

interactions found to be conceptually similar were grouped together into categories. Later it was realised that axial coding had taken place, this process uncovered relationships between categories and subcategories, and it helped to explain the inner working of the category (Strauss & Corbin 1998).

Grounded theory uses the constant comparison method to analyse data and although this technique was not fully applied, it was carried out in principle. As described by Boyatzis (1998), this strategy involves comparing one area of data with another, looking for similarities and differences. The purpose of this is to develop relationships between the data or to identify how they may differ. An example of this process was evident when the 'disruption of labour' was examined; constant comparison identified the various codes within this theme. Data from the interviews were transcribed and then like was compared with like, similar codes were clustered together and given an initial label which formed a category (Chenitz & Swanson 1986, Clarke 1992). As the process of analysis continued, more categories were established, some could be combined with others where as others were recategorised or discarded. The advantage with constant comparison method is that as patterns emerge from the data it can be further tested in the field i.e. at the next interview, the interviews can become more focus and categories are eventually saturated in that no more new information can be added to them (Chenitz & Swanson 1986). This process could only be carried out to a certain degree because of the nature in which the data was collected.

This process would have reduced the amount of data that were collected, however, in this case the interviews had all taken place before most of the analysis had commenced, so the comparisons were made after collection. This produced a situation where some categories were over saturated, whereas other issues could have been clarified had they been followed up in further interviews.

Immersion in the data is an important part of the process, however there is immersion and then there is drowning (Strauss & Corbin 1998). When categorising reached an impasse due to the overwhelming amount of data, memos were written, notes concerned with thoughts and analysis about different categories. On these occasions when certain sections caused a conflict in thinking, a memo was written to capture the ideas of the moment (Strauss & Corbin 1998, Glaser & Strauss 1967). Returning to them during the analysis helped uncover the properties of the category, multiple memos provided a development history of a category and helped to define inclusion and exclusion criteria (Glaser & Strauss 1967, Lincoln & Guba 1985).

Computer Assisted Data Processing

Computers have revolutionised quantitative analysis but the impact on qualitative analysis has been much smaller. The main focuses of the soft ware for qualitative data are the retrieval, modification or transformation of data. Interpretation is still very much the domain of the analyst (Lincoln & Guba 1985).

Once all the data had been coded using the word processing program Microsoft Word, (an example of the early coding can be seen in Appendix VII), an opportunity arose to use a computer package for qualitative data QSR NUD*IST Vivo version 1.1 (N Vivo). Initially, it was thought that it would take too long to learn, however, after experimenting with it for a morning it proved to be invaluable. N Vivo appeared to work like a relational database, it had the ability to compare one piece of text with other. Blocks of text could be marked and listed under a category, described in the N Vivo as a node. All the text marked under that node could be retrieved labelled with paragraph number and the respondent's name. Furthermore, it was very easy to trace it back to the original passage in the text to see it in context. It was also possible to see if a unit of data had been coded under a number of

categories, this helped to identify relationships between categories and subcategories and the eventual grouping of categories under one heading.

Another benefit of having tried out N Vivo was the ability to examine the number of times a particular category had been marked within the data. Although there had been no intention of using content analysis, it gave interesting insight into the distribution of which 'physical signs' the midwives relied on most, this would be regarded as manifest content analysis (Boyatzis 1998) since the number of times a midwife mentioned using sound to assess labour could be measured (see Tables 2 and 3). The tables produced within the software were then exported into Microsoft Excel and then printed (see Tables 2 and 3 page 77).

The greatest benefit in using N Vivo was to preclude the need to cut and paste the themes together on the word processor or coloured card and vast amounts of glue! The data related to a category was easily drawn up into one document and comparisons could be made. Data could be recategorised at the tap of a keyboard and associated text analysed for links and interpretations. The analysis was carried out before any literature was reviewed in the attempt to allow the data to speak for itself. Almost all the data was coded and categories, however decisions were made to focus on issues directly relevant to the question being asked, this helped to reduce the enormous amount of data produced (Burnard 1991).

In conclusion, the methodology carried out in this exploratory study has attempted to follow many of the principles of grounded theory. However, it has not been possible to be true to the whole process as described by Strauss & Corbin (1998), the main reason for this has been the constraints time.

Results and Discussion

Themes Identified

In this chapter diagrams will be presented to show the themes identified from all six interviews. A model will be proposed that explains how independent midwives assess the progress of labour and each theme will be discussed with evidence to support the findings. Three main themes emerged from the data and a further two minor themes were identified that either demonstrated interactions between the main themes or showed how the dynamic process of assessing labour was disrupted. The three main themes identified were:

Physical signs: These were both formal and informal in nature. The informal signs were codes that were judged to have changed as labour progressed, such as the sound made by the woman or her change in behaviour. They were classified as informal because they are not recognised as signs of progress by hospital protocols (see Appendix II, II a) and there is scanty coverage of these in the literature (Hobbs 1998, McKay & Roberts 1990). The formal assessment related to the use of vaginal examinations to assess labour. It is the main measure of progress of labour in hospital where the dilation of the cervix is measured and plotted on a partogram (Studd 1973).

Knowing: This incorporated different sorts of knowledge that may be used in the assessment of the process.

Woman in Labour This incorporated knowing the woman and the value of giving continuity of care that builds up trust between the woman and midwife to form a partnership in labour.

The two minor themes identified were:

Interaction of factors: This demonstrated how the midwives used the themes of ‘knowing’ and ‘physical signs’ to assess the progress of labour.

Disruption of labour: This identified factors that caused the process of assessment of labour to weaken or fail. This included the environment the midwife practiced in, fear of criticism of their clinical decisions and any breakdown in relationship between the midwife and the woman or the woman and her partner.

List of Themes Generated from the Data:

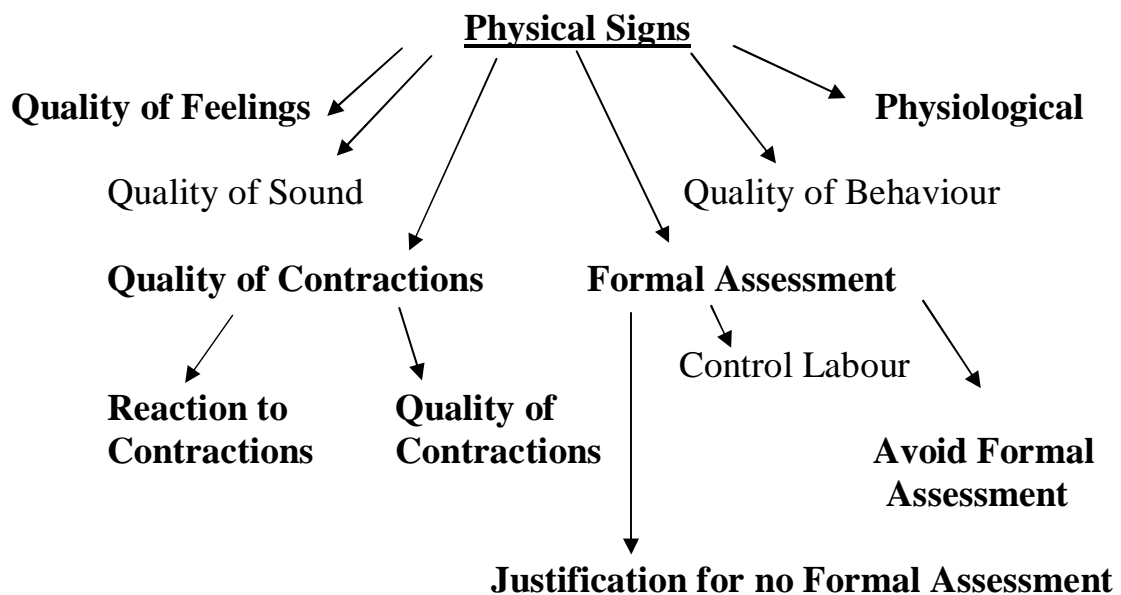


Figure 2. Physical Signs

Figure 2 includes both formal and informal ‘physical signs’ that the midwives recognised as progress.

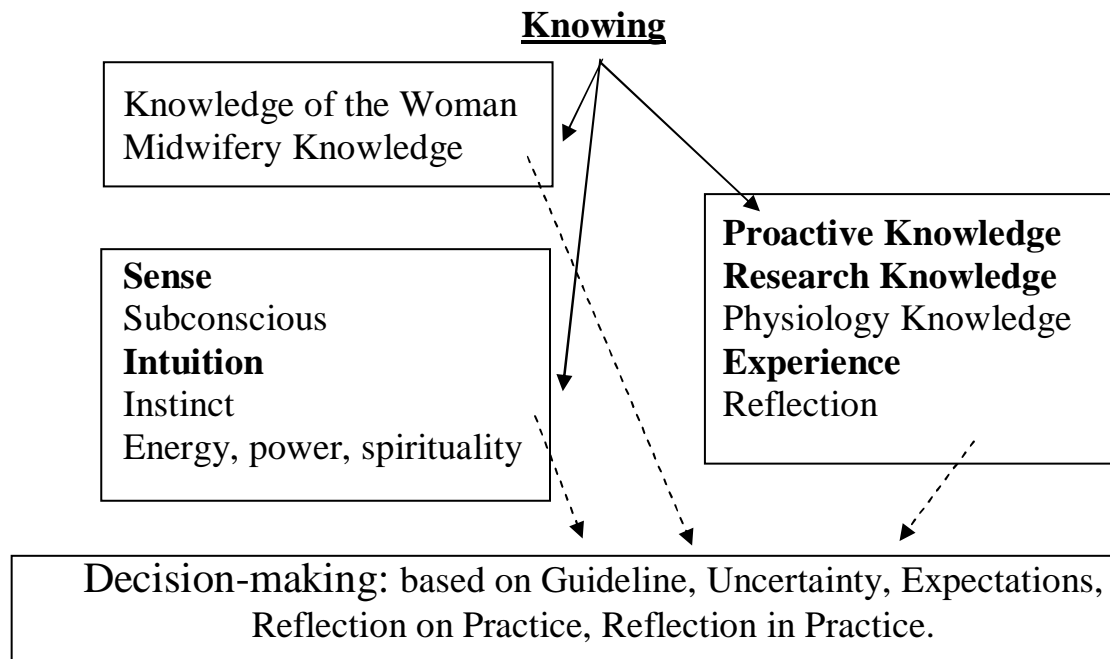


Figure 3. Knowing

In Figure 3 above, there were three main areas of 'knowing' and these were used to interpret the 'physical signs' of the 'woman in labour' and to provide a framework to make decisions.

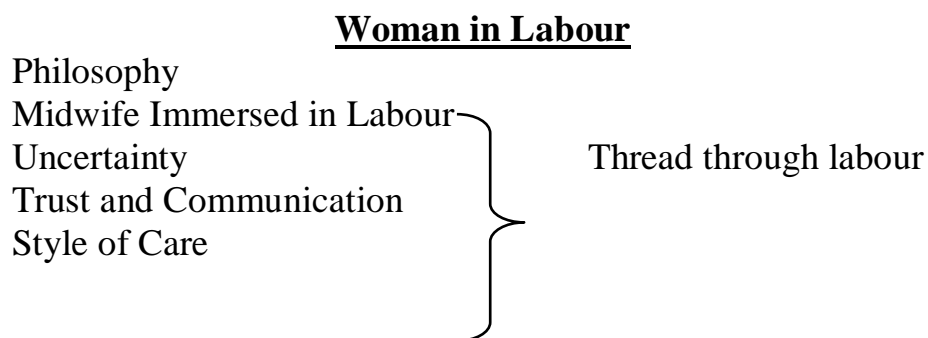


Figure 4. Woman in Labour

Figure 4 above shows the third main theme, the codes that form this group were threaded through the labour, closely associated with the woman experiencing the labour.

Disruption of Labour and the Knowledge of Labour

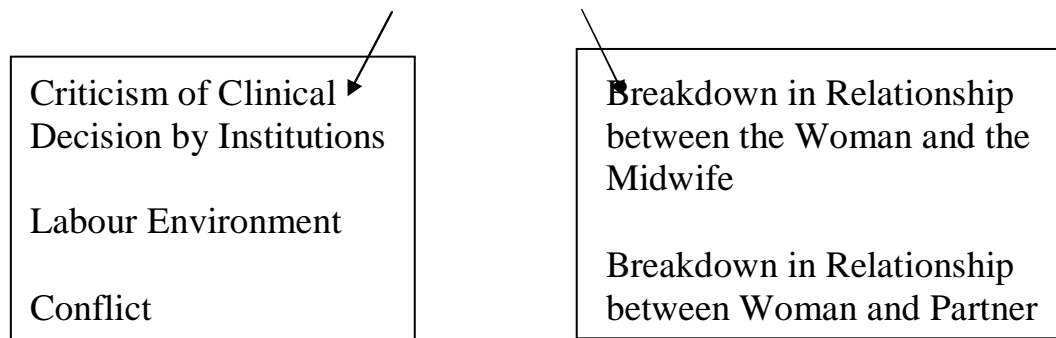


Figure 5. Disruption of Labour and the Knowledge of Labour

The theme in Figure 5 emerged from the occasions where the process of assessing labour was disrupted.

Physical Signs

This theme (Figure 2) consists of conscious or obvious signs that the midwives used to decide that women are progressing in labour. The midwives could identify changes in quality of behaviour for example and in the case of contractions particularly, a change in the quantity of contraction as labour progressed. In some cases, the midwives were able to describe the woman's response to changes in contractions and set them in the context of progress of labour. The ability to read these signs were dependent on the midwife's knowledge of the woman antenatally and the quality of watching and listening to the woman in labour.

Quality of Sound

This code proved to be the most definitive for giving clues for the progress of labour. The remarks were grouped into similar codes of meaning and examined for relationships and connections or interconnections.

Assessing the start of labour

All the midwives interviewed felt they could tell if a woman was in labour just by talking to her over the phone. It is possible to assess early labour, this is because the midwives have known the woman antenatally and are able to detect change in behaviour and response to contraction, alongside sound.

'I talk, I listen to somebody having one over the phone if I'm not there, lasting good length of time and really being quite strong, strong enough you know to stop someone saying, "Oh, you see I'm just having one now and it's.." (Margie)

'You can hear their breathing rhythm, and you can hear whether their breathing anxiously, or relaxed, or whether how much of their lung they are using, and to some extent that tells you how comfortable they are in their labour.' (Martha)

The ways in which midwives assessed labour was to listen to the woman's response to talking through the contractions. The midwives were able to relate this to how they have seen the woman behave antenatally but is it not regarded as definitive.

'So over the telephone I can often hear the difference in their voice because I have known them antenatally and worked with them antenatally, I've known what their voice sounds like and so I can pick up initially from then, it doesn't always work.' (Meredith)

Active phase

Using sound to assess labour is usually done in conjunction with other signs such as behaviour and response to contractions. When the woman is in the active phase of labour, a different range of noises accompanies it. The noise is stronger and louder, strong enough to stop her speaking and as labour becomes more intense, woman exhale more deeply, the midwives seem to know the women well enough to realise that it's not taking everything from her. When women are noisy, it is regarded that they are progressing well.

'Noise is a very good clue as to what the woman were doing, very often, not always, it is not a sure fire certainty, but generally speaking, if women are quite noisy they're generally, their generally cracking on.' (Mary)

'It's like when I watch a video of woman in labour and they say to you, "oh how far on is she there", and you say, "oh I think she's probably about 4 to 5 centimetres", and it's something about, yes she's making noise, she's having to cope with the contractions,

she's having to breathe through it but it's not taking everything from her; it's not taking her to her limits.' (Maggie)

Advanced Labour

As labour progresses all midwives were able to identify that labour was progressing well. During this stage the sounds become more frantic and it is associated with the woman being in transition, a period of time that is difficult to bear. The woman is estimated to be around 8 – 9 cm dilated; she may make whale-like or grunting sounds suggesting she is approaching full dilatation. The deeper the sound is, the more open the woman is, should the period of sounding frantic be prolonged, this could indicate that there is some sort of delay for some reasons.

'I think when women are coming up to, sort of 8 - 9 cm there can be a sense of the real frantic sort of sense about the noise. Again, the thing that sometimes tells you that things aren't moving on, because if they had that for too long, that is a suggestion to me that something is not right because I don't think nature normally lets us have that for too long because it's a real, hard, hard time for you, it really is, it's so difficult. ' (Maggie)

'The labour gets more intense, people often need to, as they exhaled more deeply, they also start to make noises, and often when you get to transition, and then, transition itself, it's much more kind of, I would say a gentle kind of moanie sound or almost like a whale or a type of singing.' (Martha)

'If the labour is progressing, she'll move on to grunting, and then you can be pretty certain that she's coming up to fully.' (Mattie)

Second Stage

Second stage is obvious; all the midwives reported a change in sound and the nature of contractions. The sound is less frantic and more guttural, more groaning and animalistic, a primal kind of sound which the woman needs to allow to come from the depths of herself. Women will occasionally give a screech as the perineum stretches; this is confirmed by seeing the area stretch. If the woman is ready to give birth, an earthy, animalistic sound is heard.

'You know, sort of bear, much more animalistic, sort of very primal, kind of sound. So they are the sort of sounds and of course you will also get the odd aaargh (high pitch screech). Like can you get a bit of, when the baby stretching the perineum literally at the introitus or something like that.' (Martha)

'If she's ready to give birth it's a wonderful opened earthy and animalistic sound, I mean it is wonderful because giving birth is not something one can do with one's lips and throat shut is it, you've got to be right down there.' (Meredith)

Mixture of Physical Signs

Sound happens in conjunction with other signs, the noise the woman makes in relation to the contractions she is experiencing are an indicator of how far on the labour is and how well the woman is coping. Observing the woman's behaviour and changes in posture in relation to grunting or groaning allows the midwife to make an assessment of labour.

'The sensing is an amalgamation of watching the woman's behaviour, how she's talking, the sound she's making, it's an amalgamation if you like of, that's where you're picking the sense up.' (Meredith)

'So they would all be happening in conjunction with each other and that's basically how I would be looking at progress.' (Martha)

Clues as to how the woman is coping with labour.

Sounds were reported to give an indication of how relaxed or anxious the woman is and how comfortable she is with the labour. It was felt by the midwives that the sounds indicate whether the woman has abandoned herself to the process, allowing the instinctive, innate voice to be heard. Has to be her own sound, not acted or imposed. The woman has to abandon herself to the noise.

'You need to allow the noise to be totally subconscious and to just erupt from you, and it will need to be a sound you have to make.' (Meredith)

Sound is seen as an easy indicator to assess labour.

'I find the vocal stuff of the easiest thing to go on.' (Mattie)

There may be some sort of universality in the manner in which sounds change as labour progresses. As quoted above, Maggie was able to assess labour by watching a video and interpreting the sounds of labour made by the woman. She could even conceive a chart of sound that could represent the progress of labour.

'I would expect to see this sort of like a chart where you could trace the noise and then it would change in quality and either she will have a gap and then she'll pick up and start, you'll get a sort of more guttural.' (Maggie)

Quality of Behaviour

This code was not as specific as the quality of sound; the midwives could not define the stages of labour as clearly. Early labour or labour that is not established is characterised by the woman being able to cover any signs of labour.

'Whether they are still being a hostess. "Oh how nice to see you Mattie, do you want me to put the kettle on", and that gives you an idea that may be they are not terribly well established, (Mattie)

All the midwives expected the woman to become more withdrawn and meditative, more focused on the process as labour progressed. This behaviour needs to happen and can be taken to extremes, some women finding a 'cave' like place or 'nest' to be completely on their own. This type of behaviour in labour is well known, (Odent 1994) endorphin levels rise during transition and early second stage altering the woman's perception of time and space, the midwife watches the degree of the woman going into herself.

'My perception of is, that the woman needs to go in so she can be with her body, workout what's going on and how she can best deal with it, and so putting yourself out and being, very nice to everybody around you doesn't allow you to do that.' (Martha)
'You can observe labour intensify by the woman's level going in on herself,' (Mattie)
'They become very settled, may be more introverted and into themselves,' (Maggie)

'The way in which a woman moves, the way in which she is um, how much she is still out in the world, how much she is able to communicate with me, how much she is um, um, disappearing inside with the contractions and then sort of coming out'. (Margie)

'Most women, when they are in labour will start to try and find themselves a little pokey places in which to give birth or somewhere that they feel safe, they will make themselves a cave.' (Meredith)

It is possible to assess how labour is progressing but it is less definitive than the quality of sound. The woman going into herself indicates active labour.

'Something quite meditative about it and you know that somebody is really kind of in, I would say they're over 5 cm usually when they are in that state.' (Margie)

The midwives recognise a sudden change in behaviour and particularly the inability to cope as a possible cue for transition. The woman may become difficult or just do something completely different from what she was doing before.

'Suddenly not being able to cope and kind of transition cues.' (Mary)

Their behaviour is associated with physiological events; the release of endorphins is associated with the trance-like state that women attain when in labour. More recent research however, suggests that the state could be caused by the release of oxytocin (McCarthy & Altemus 1997).

'Generally women will stop talking once they start getting their endorphins going.'
(Meredith)

Like the quality of sound, on its own it cannot be relied on, it is used in conjunction with other 'physical signs', it needs to be interpreted in the context of a particular woman and her labour. It also carries uncertainty as a method and can be confirmed or checked by performing a vaginal examination.

'I thought, right I'll go away and do some visits and I didn't even think about examining and for some reason I just thought, I'll examine you, I'll just check but she really didn't look as if she was in labour and she was fully.' (Mary)

It is not necessary for woman to become withdrawn for labour to progress but it is a general guideline.

'Not all women go in on themselves but women will intensify something, whether they will intensify their distraction like activities, or whether they will just go more deeply into themselves.' (Mattie)

The midwives identified that change in behaviour and reaction to contractions can also be a sign that there is no progress. The woman senses that she is not progressing and is unable to remain focused. She becomes inconsolable and unable to be reached by words of encouragement.

'It's these really strong contractions really is finding it hard to cope with, don't know what to do with themselves and it seems that no matter what anyone can suggest, no matter what they try, they don't, they don't seem to find a way through it. So I think it is, it's that sense and, it's very hard to put your finger on, but it's a feeling that she herself is not moving forward somewhere.' (Maggie)

None of the signs provide certainty and here Mattie suggests that it's not important to be that definitive about what stage a woman is at. It would seem that if all the right signs for that woman are present, it is safe to allow that labour to happen and that time will reveal if there is a need to take further action.

'So by observing the behaviour and the posture as well as the grunting or the groaning you think, okay this looks like so and so, you would then give things it's time to go on, but know that because she hadn't confirmed say it full dilatation, that you could be wrong, and may be the woman still had an anterior lip, or maybe she was only six centimetres getting a premature urge to push.' (Mattie)

In combination with other signs, the second stage of labour is characterised by the woman taking all her clothes off and assuming an all fours position.

'Then there's the good old red line that goes up the back but you don't see that until fairly late on in labour which is when women start to strip off and get on all fours or if they are wanting to get in the pool or something like that you know.' (Meredith)

Quality of Feelings

This theme requires the midwife to ask the woman what feeling she is experiencing, it is not always possible for women to respond to the request for information because the women tend to become more withdrawn as labour progresses.

'The sort of um, signs of progress that I would be on the lookout for whether or not she can articulate what she is feeling inside, whether she can feel the baby moving down.' (Margie)

Following the birth, the midwives say they will reflect over the birth experience with the woman, the woman can often articulate what she felt during labour, this would reinforce the midwife's confidence in what she thought she perceived during the labour.

'She had touched the baby and I said to her, "well do you think that frightened you because you could feel what was behind". She said, "no because I could feel it coming through, she said, I just could not let that last bit relax".' (Meredith)

The midwives report that women provide information about where the pain is, feeling the baby move down and the cervix open. A sudden change in feeling suggests the beginning of another phase in labour, as the woman enters transition her behaviour can become demanding and irrational as though she is not sure what she wants. The beginning of second stage is commonly heralded by pressure sensation or an urge to push.

'It might be her being stroppy, or difficult, the thing about holding on to people and telling them to go away.' (Mattie)

'Cos women are really good at saying I can feel the baby moving, I can feel my cervix stretching, you know, I can feel the head rotating, they can tell you that.' (Martha)

As to how the midwife values this information seems to vary, as Mary effectively demonstrates. Once again, quality of feeling would not be relied upon alone; it is taken in context with the rest of the 'physical signs'.

'I'll ask woman what they're feeling, and that gives you good clues as to what is actually happening or they'll tell you, you know, they'll tell you what is happening if you give them an opportunity.' (Mary)

When asked if it was possible to coax information from a woman in labour, Mary's replied:

'I think sometimes they can get into a situation when they started telling you what they think you want them to say.' (Mary)

If clarification is necessary, there is always the opportunity to do a vaginal examination but it does not seem to be essential to know exactly where a woman is in labour.

‘Well if there is a lot of ambiguity, than I’ll suggest maybe doing an examination, if that’s what she wants.’ (Mary).

Physiological Signs

This group of codes identifies what physiology the midwives use to assess labour. The midwives defined Physiology as actual physiology observed or felt by the woman experiencing labour. It is closely associated to the quality of feelings code but the feeling expressed is related to more specific physiological responses or occurrences. It also includes codes related to how labour impacts the baby and any changes that are used to assess progress. Some of these physiological signs will be enlarged upon in other parts of the study.

Once again there is no one definitive sign, all the cues are interpreted within the context of the woman and her labour. Vaginal examinations will not be considered here, it will be discussed in a section of its own (Page 69). The most easily identified point in labour was the approach of second stage and progress in second stage.

Progression in Labour

Vomiting occurs at either the beginning of labour or the end and the desire to eat or drink is reduced as labour progresses.

‘You find that, err, earlier on people will want to eating drink more and, and you know often as it gets nearer the end it harder to get anyone even to even drink, let alone eat if they need to’ (Martha)

‘You know she throws up, sometimes that can be the beginning of labour and sometimes that it can be just before she pushes the baby out.’ (Meredith)

Other indicators of progress are changes in breathing patterns, ‘shallow, fast breathing’ does not occur after 4 cm and as the baby descends, the woman will experience pain in

different places. Abdominal examination was not identified as a way to assess progress, the midwives were aware of the position of the baby since they had visited them recently. Those that do use abdominal examination to assess progress, use it in preference to vaginal examination.

‘I certainly know of people who say that perhaps the way they preferred to assess progress is with the decent of the head abdominally rather than vaginally.’ (Mattie)

Second Stage

Most midwives spoke of the purple line that extends gradually from the anus to the sacrum as labour progresses. It is thought to be unreliable except if the woman is in second stage; there is also an area above the ligaments connecting the sacrum to the ilia that becomes more flexible during labour, known as the Rhombus of Michaelis (Sutton and Scott 1995). When a woman is on her hands and knees or standing, the Rhombus of Michaelis can be seen clearly because the pressure from the fetal head. This feature is apparent just prior to the beginning of the involuntary pushing urge of the second stage; the fetal head lifts the sacrum and coccyx out of the way. This suggests that women in the midwives’ care do not labour or give birth lying on a bed; the midwives have a good view of the woman’s back.

‘I try to use the purple line, I have varying success with it,’.....‘I think it’s one of those things that, you really can see it when somebody is fully, fully dilated, sometimes in the process of getting there it can be misleading.’ (Maggie)

This is confirmed by Meredith who adds changes in behaviour such as women taking off all their clothes and going on to all fours.

‘Then there’s the good old red line that goes up the back but you don’t see that until fairly late on in labour which is when women start to strip off and get on all fours or they are wanting to get in the pool or something like that you know.’ (Meredith)

When the woman begins to feel a pushing sensation, an urge to push or has her bowels open, this suggests that second stage is imminent or in progress. The pouting of the anus

and a change in the position of where the pain is felt seems to demonstrate that the baby's head has descended.

'When it.. (pain).. starts to get more round the back and bowel pressure and that kind of stuff a lot of it's talking more about descent.' (Mary)

The baby's heartbeat can be traced across the surface of abdomen as the baby descends during labour and 'tucks behind the pubic bone'. The distinctive sound of the umbilical cord can be picked in the pubic area, this informs the midwife that the cord is round the neck and prepares her for that. When the fetal heart rate drops towards the end of labour, it is interpreted as the head descending in second stage.

'If you've got it and you've had it's clear, and it's still clear, and you know, it will move down as the baby's moving down, so that, that can be really helpful, as can picking up the cordal sounds around the pubic hair and thinking I'll be prepared for the baby to come out was cord round the neck and those kind of things.' (Martha)

Sometimes a striking change in posture will herald the beginning of second stage, this happens in conjunction with contractions.

'It may be a change in posture, somebody who's been standing up and lunging leaning forward rocking, and something swaying the hips around will suddenly sag with her knees, with a contraction, and that's nearly always either the start of the second stage or close to, prelude to second stage.' (Mattie)

This also demonstrates that the woman is in an upright position; however she goes on to explain that this change can be observed in a woman lying on her side.

Usually a combination of factors is taken into consideration, the woman changes her position, the baby's head is stretching the perineum and there are external visible signs as the head descends the birth canal.

'Or its you know, changes in, I mean I look for example, um, for anal dilatation and I look for the line, I look for the Rhombus of Michaelis, those sort of external signs and the sort of different positions a woman will take, obviously the fact, if she opens her bowels, I get very excited.' (Margie)

Quality, Quantity and Reaction to Contractions

A number of issues relating to contractions have been covered in the other sections this again emphasises the 'interconnectiveness' of interpreting the various signs. Early or prelabour is associated with the woman still being able to talk with ease through the contractions, so contractions and sound have a connection.

'She can continue to talk through them then it's either early labour or prelabour or not in established labour.' (Mattie)

All the midwives consider the 'rate, strength and frequency of contractions' this is seen as 'standard stuff' (Mattie) but the factors which indicate actual progress are not easily definable. Mary's direct approach sums up what is felt about contractions.

'I mean, at the end of the day, you need contractions to have dilatation don't you and according to what kind of contractions and what length frequency ...and strength women are having generally speaking the dilatation will correspond to that.' (Mary)

So, as long as there are contractions there will be progress and time will tell if there is no progress. The effectiveness of contractions is regarded as important but there is no clear guideline as to what constitutes an effective contraction. As long as they are regular contractions and the woman is able to concentrate and cope with them, 'that would count'.

'Concentrating on what they are doing and the contractions are coming regularly, they don't have to be every 2 min or every 5 min or every 6 min, normally they are less than every 10 min, but you could have somebody getting contractions every 10 min that were really, really intense and were lasting a long time and that would count, I would be thinking, OK she probably is in good labour.' (Mattie)

'The woman is coping really well with strong contractions that are obviously very powerful, that she is really into the rhythm of it, she is doing well, then I think I'm very comfortable with that.' (Margie)

Midwives are able to detect the subtle changes in the intensity of contractions that indicate progress because they stay with the woman. The midwives make sense of these changes because they can put them in the whole context of the labour.

‘Again its often one of those things with hindsight isn't it, when you first look you think that she's having quite strong contractions and you know she's having difficulty with them and then of course, when things move on a little more you realise actually, that was just the way she was reacting at that time and that the contractions have got much, much stronger, much more difficult.’ (Maggie)

There is a noticeable change around second stage; the woman feels she can no longer cope. This is associated with change in behaviour, which has been covered before (page 58), so contractions are seen in context with other signs to indicate this stage. As mentioned in the previous section by Mattie, change in posture with contractions is an indication of second stage.

‘Often they're saying I can't cope, they've had enough and all that kind of stuff, and when the woman has been coping quite well it often makes you think well you know, you're probably heading towards the end of first stage, um, and putting all that in context with what's happening with the contractions.’ (Mary)

But if the woman is not approaching second stage and she is not coping with the contractions and if contractions die off, this can be a warning sign. Should the woman be struggling with the contractions, this often suggests there is a problem with progress. It may be a physical or emotional blockage. It is considered normal to have good, strong contractions but it is the reaction to those contractions that can indicate no progress. This will activate a sense in the midwife that there is something else happening.

‘She's been contracting really well for quite a long time but you'd expect her to maybe be getting there, fully and she's not, or if the contractions have really died off and you're wondering what is happening (Mary)

‘If somebody is struggling to cope with contractions, um, even after you know, they have been going for a while, and they are struggling to get into the rhythm of it for what ever reason, I might then, part of me, I will have antenna I think that will say okay, what, why is she not able to. And it may be that, um, you know there's going on in her head about, maybe its fear, maybe it's you know, if it's her, if it's her first baby, is this about, you know, becoming a mother is there an anxiety, you know.’ (Margie)

Maggie offers an explanation for the woman's state of mind in response to the strong contractions. The woman can sense her own situation; she is aware of the lack of progress and this has the effect of losing her focus despite encouragement and support from those around.

'It's these really strong contractions really, finding it hard to cope with, don't know what to do with themselves and it seems that no matter what anyone can suggest, no matter what they try, they don't seem to find a way through it. So I think it's that sense and it's very hard to put your finger on but it's a feeling that she herself is not moving forward somewhere, she's stuck. I think she knows it is well because usually what happens they say things like I don't know what to do, I can't cope with this anymore, it's usually a something coming from them.' (Maggie)

It's not fail safe.

'I suppose so, but I think it's not completely fail safe, I've had a few women that have really surprised me, and, you know, women with really strong bearing down contractions, primip I can think of, you know, and I really thought she was about to give birth, to the point I even got my equipment out, and um you know, pushing like mad, and after an hour or so nothing visible and I found that she was six centimetres.' (Mary)

When Mary was questioned further about what it was that made her feel unsure about a situation, she identified factors like contractions wearing off or the woman working hard but not getting anywhere. She would have formed some sort of expectation of progress from observing the woman in labour and that would not be met. She feels she can make these types of judgements about the quality of the contractions because she has a relationship with the woman.

'As contractions go off or she's finding things really hard work but that doesn't seem to be progressing, you know, you expect her to be getting up to fully but that doesn't seem to be happening or something like that maybe ... I think because of the way we work we really know who we're working with that makes a big difference as well, so that makes things a lot easier and I think you have a lot much more kind open communication so very often I'll ask women what they're feeling, and that gives you good clues as to what is actually happening or they'll tell you what is happening if you give them an opportunity.' (Mary)

Once again, there is nothing specific about contractions that would make them stand out against the other signs as being any better for assessing the progress of labour. They are used in conjunction with the other others signs and like the other signs they take on more meaning if the midwife has a relationship with the woman.

Formal Assessment

The independent midwives do not use vaginal examinations (VEs) to assess the progress of labour. The main function of VEs is to clarify a situation or confirm what is already suspected, this is contrary to hospital policy where VEs are almost exclusively used to assess progress (see Appendix II, II a). It is also useful to perform VEs if the midwife is considering leaving the woman for a while. The results of a VE are considered in conjunction with the other signs and what the woman is saying. A VE has equal status with the other signs and what the woman says.

‘I do it really as well if I am thinking about leaving her, and I'm not sure, I'll do a VE and I will assess what, station is and how much dilatation and everything else and think about that in terms with what she saying as well.’ (Margie)

The midwives find that VEs are very useful in clearing up ambiguities where labour is perceived to be either further on than it is or the birth is imminent and that has not been apparent until a VE is performed. The prompt seems to be a subconscious cue; the midwife below says for ‘some reason’ she examined the woman. Was she reading other signs that she was not aware of? She appears to feel defensive about using VEs but the other independent midwives find them useful as well.

‘I've had a few women that have really surprised me, women with really strong bearing down contractions, a primip pushing like mad, and after an hour or so nothing visible and I found that she was six centimetres, but you know I think some midwives are really kind of anti VE and I'm not a midwife that's anti VE, I think they've got their role and I think they can be very useful like in that situation of a multip I went to visit, she called me out, she had been contracting, not that long I got there, she's completely calm, I

thought, right I'll go away and do some visits, and I didn't even think about examining, and for some reason, I just thought, I'll examine you I'll just check, but she really didn't look as if she was in labour and she was fully you know, gave birth about an hour later, I very nearly went away, so that there are no hard and fast rules.' (Mary)

'Well I'd say I probably get through 80 to 90 percent of labour's without a VE, so that sounds like not very useful but I wouldn't be without them as a tool, I would not like to go to a labour without that in my tool bag because I think it's when you need it.' (Martha)

The midwives find VEs particularly useful when there is a conflict of information, signs suggesting one thing and the woman giving witness to the opposite. Once again, examinations are used as a tool to clarify rather than to predict or measure progress.

'I think occasionally they can be very useful, I think they are useful when you have a conflict between the information you are receiving, if somebody tells you that they are labouring well and hard and you don't think they are, or somebody tells you they are wanting to push and you don't think they are, or, somebody says they are not pushing and they are, you know, it's that, they are showing you all the signs of doing something, but they say they are not, then the VE's use useful. VE's are probably useful a bit like ultrasound scans when, there's a discrepancy between what you feel (abdominally) and the information you have from last menstrual period or something like that, when you've got that sort of discrepancy, you say okay let's use a tool to see which one it comes up with, and probably the VEs is like that'. (Mattie)

Whatever the midwives' opinions of VEs are, they value the woman's choice or need for confirmation of progress, even though the midwives feel confident about the progress of the labour. They value the woman's need to feel equally confident about her progress, particularly if the woman is unable to have her own sense of where she is in labour. The midwife is not the one controlling the procedure.

'I might have in my gut, in my knowing place really feel like actually this is really all right and then say to her, what would reassure you and sometimes she might want me to do a vaginal examination.' (Martha)

Both the woman and the midwife may have a sense that the labour is not progressing. The midwives say they would offer a VE to confirm the situation. The woman may initially decline the offer but will eventually want to confirm her own sense of lack of progress. It is

a co-operative decision, the midwife is not imposing it on the woman and only occasionally requires this sort of conformation.

'They say things like, "I don't know what to do, I can't cope with this anymore", it's usually a something coming from them and occasionally I might say would you like me to examine you because they're saying those sorts of things and sometimes a woman will say, no not yet and okay she's not ready then. But then eventually, she'll say yeah I want to know what's happening because somewhere inside her she's got a feeling that it's not moving forward, she still stuck in the same feeling.' (Maggie)

Another reason for performing VEs is unmet expectations. A decision has been made about progress from the other 'physical signs' but they have not been realised in an appropriate amount of time. Once again, a VE can be used to clarify a situation.

'Within a certain length of time we are going to be getting ready to push, but then if somebody is getting more distressed and the pushing urge hasn't come through properly, or, there are no signs of second stage and you do VE.' (Mattie)

'I perhaps might check and anterior lip if I've got all the signs of imminent second stage but nothing much happening.' (Margie)

However, Mattie goes on to argue that perhaps VEs are not necessary. There are two ways of looking at a situation where expectations of the progress of labour are not being met. The first is the 'certain' way; a VE will confirm what is already expected from the assessment of 'physical signs' and the second path, the 'uncertain' way. This is where the midwife is prepared to wait and see and in time those expectations will be confirmed. Whether the lack of progress is confirmed or not, the interviewees expressed that their care would be the same and so question the need for VEs.

Within a certain length of time we are going to be getting ready to push, but then if somebody is getting more distressed and the pushing urge hasn't come through properly or there are no signs of second stage and you do a VE and you find that somebody has got an anterior lip, you say okay, let's give it some time to go away. So you might surmise there was an anterior lip because of the lack of visibility of the head, you are expecting to see it and it's not coming, it's not coming. So you could choose to confirm there was one with a VE or not. You could say to somebody, looks like you're ready to push but the signs aren't quite right there, so either you've got an anterior lip or

you are not fully dilated, you need to hang on and see, there's no point in pushing yet if you're just get exhausted.' (Mattie)

Although VEs have their place in assessing labour, routine examination is viewed as disruptive to labour and an unnecessary intrusion used to complete a chart.

'To get a good partogram reading you need regular VEs and I think they are intrusive and they may stop people labouring.' (Mattie)

There is also a strong feeling about imposing needless VEs onto a woman. Meredith makes her position clear, she questions her practice to make sure it is really necessary and if they can be avoided, the woman has a sense of achievement because she can trust her body. If it is an abuse it has consequences for the woman experiencing the procedure and should not be taken lightly.

'I wobble sometimes when I examine women but I sit there and I really questioned why, why do I need to do an internal examination because I think that internal examinations are an abuse, they are an invasion, and yes women don't appear to mind. But you talk to any woman in any quiet circumstance after the birth and if they haven't had any examinations they are enormously empowered by the fact that their body gave birth to their baby.' (Meredith)

'So, what are we doing just making it routine, it is an abuse, it's nothing more than that, it's nothing less than that and it should be seen as such.' (Meredith)

Meredith's feelings are supported by Chris Warren (1999), another independent midwife. She supports the use of VEs but asks us to question why we are doing them. The distress caused to women and invasive nature of VEs has been pointed out by a number of writers (Bergstrom et al 1992, Clement 1994, Devane 1996, Warren 1999).

The midwives see VEs as a fall back when all else fails rather than a first resort, particularly if the midwife is tired and her other senses are failing, she becomes more ritualistic in her care. It is useful in an emergency, though what that is has not been defined. They also identify it as the medical model; it is relied on when the midwife does not have a trusting

relationship with the woman and her partner. This would suggest that not knowing the woman must in some way blunt the other signs used to assess the progress of labour, not knowing the woman engenders an environment of uncertainty. It may also suggest that the midwife lacks confidence in her own abilities to make a decision without the woman's contribution, this could be why the VE is used more in the hospital setting in that the midwives do not have that same degree of continuity with the woman. This is supported by Helen Shallow's comments on the type of care provided in the labour ward environment. An independent midwife herself, her study revealed that midwives on labour wards generally looked after women not known to them (Shallow 2001).

The midwives associate VE's with a defensive model, automated rather than being able to respond to the woman in a more spontaneous way.

'There would be vaginal examinations, they're quite useful if you're a bit tired and you need to switch into automated pilot, they are very good kind of safety but when everything is all right and you know that you're not overtired and that you're OK or whatever, then they are less appropriate and I think they're less appropriate because, when you know someone. I mean I know when I don't know someone very well if I'm just doing the labour which I rarely do, I have to use the medical model more because I've got less to go on and in some respects I feel slightly more defensive in my patterns, because I'm less sure of the ground between myself and the woman and the couple and so on. So I suppose what I'm saying is, it's a defensive model, I try to work with a responsive, reflective model and that's basically really crucial that you know someone.'

(Martha)

This implies that the model she uses as an independent midwife gives her more information about the progress of labour.

The midwives feel that the way they practice and use VEs is not accepted or valued by the institutional environment because it has not been recorded in the way that is expected on the labour ward. It is not necessarily that one is more correct than the other; it is perhaps more the case that one way has more validity or power, more authority than the other. It

was felt that formal examinations carry weight in the institutional setting, they are seen as concrete evidence. There is a sense of compulsion to do them and being a rebel if you do not comply – ‘can't really get away with not doing VEs’ – ‘Institutions are more logical’ which suggests the midwives feel that the artistic, intuitive side of midwifery is not valued.

‘They'll look at your notes and just because they are not what they've ever seen before, they will make the comment about that nine times out of 10 and then they'll ask you where are the partograms and you haven't got one, and then I wish I did have one to some extent because you are talking about VE's. I think it's much more sort of regimented and logical in hospital and you can't really get away with not doing vaginal examinations, and you can't really get away with just intuition about things. But you can't go out and say to the ward round, oh I just think she's really getting on, you've got to have something concrete there to justify.’ (Maggie)

Partograms

All the midwives were asked what they felt about partograms, since this is a tool used with in the institutional setting. Unanimously, they replied that they had no use for them in their own practice.

‘I hate them, I never use them, actually.’ (Maggie)

‘I don't think I need it.’ (Margie)

‘I don't use a partogram.’ (Martha)

‘I don't use them.’ (Mary)

‘I don't use them.’ (Mattie)

‘Partograms? (Ridiculing) what are those? I think they are a total...(deep sigh)

A waste of paper, a waste of time, it's a bad communication aid; it's only used because of fragmented care.’ (Meredith)

All the midwives echoed Meredith's last comment about fragmented care. Partograms were seen to have a place within the institutional setting because it is not possible to provide continuity of care in that environment. This is contrary to what Studd (1973) felt about the partogram, he seemed to think it provided better care.

The midwives pointed out that midwives in the institutional setting have to look after more than one woman on a labour ward so no one person will carry the overall view of care for one woman, the partogram provides that picture.

'I suppose, when you working within an institution with loads of women going through it's on a conveyor belt and you've got no continuity of care and you've got midwives who are often looking after three women in labour, which the very thought scares the hell out of me, I don't know how you do that, but anyway, I suppose it does help then with women slipping through the net kind of thing.' (Mary)

'I think partograms are really useful when you've got one person looking after a lot of women, so in a labour ward scenario.' (Martha)

There were however, some disadvantages to the midwives not having a partogram in their notes. It is only when a labour is seen to deviated from the expected line that the medical team is activated into action, the partogram convinces them that help is required (Studd 1973, O'Driscoll 1975). When the midwives transfer into hospital, they have no graph to support their decision to transfer the woman into hospital, they report that it takes a while before there is a response to their request for help.

'I think they are quite useful for hospitals staff so that if you happen to transfer in the somebody who has had a long labour and you can be bothered, or you have all the time to fill in all the bits on partograms, you can convince them that this woman has been in labour, because your woman who walks in with it and is compos mentis is because she has been eating and drinking, the staff don't think she has been in labour, where as if you have fastidiously filled in your partogram, that would probably convince a lot of them.' (Mattie)

In the methodology it was discussed that the computer program N Vivo was used to code all the passages. It was possible to produce a table illustrating how many times each code was used by using the search facility of the program. Table 2 was created, it demonstrates the number of times each 'physical signs' were referred to in total. Table 3 was constructed to show the distribution of reference to 'physical signs' used among all the midwives. It can be observed from Table 3 that they all used a variety of 'physical signs' to assess the

progress of labour; behaviour, contractions and physiology being the most often referred to. It should be pointed out that it cannot be inferred that these three signs were the most useful but only that the midwives in their dialogue referred them to them most frequently. In reference to the midwives' comments, the quality of sound was found to be the most definitive for them in assessing the progress of labour.

Table 2. Physical Signs

Code	Number of Documents Coded	Number of Passages Coded
Quality of Feelings	5	12
Quality of Sound	6	33
Quality Contractions	5	37
Quantity Contraction	6	12
Reaction to contraction	4	8
Quality of Behaviour	6	59
Physiological	6	46

The number of times each Physical Sign was referred to.

Table 3. Distribution of Physical Signs

Documents	Quality of Feelings	Quality of Sound	Quality of Contractions	Quantity Contraction	Reaction to Contraction	Quality of Behaviour	Physiology	Totals
Maggie	4	8	11	1	3	14	8	49
Margie	3	2	6	2	1	3	8	25
Martha	1	4	2	1	0	6	8	22
Mary	3	2	12	5	2	7	9	40
Mattie	0	4	6	2	2	20	5	39
Meredith	1	13	0	1	0	9	8	32
Total	12	33	37	12	8	59	46	207

The distribution among the midwives of reference to Physical Signs

Summary

Midwives are able to use 'physical signs' to assess the progress of labour, sound appears to be the most definitive, however no one sign predominates in assessing progress and all are valued as having a contribution. The signs also give the midwife an indication as to how the

woman is responding to labour and to a certain extent, the midwife can assess the woman's state of mind, levels of anxiety and whether the woman feels she is able to go on with the labour. It was felt by the midwives that these signs of progress are not valued by the institutional environment, they feel that that the institutional setting favour the more formal assessment, this is confirmed by the type of protocols set out in labour wards (see Appendix II, II a).

There is a reluctance to rely on the formal assessment to assess the progress of labour; it's use is to confirm what the midwife already suspects and to give clarity where there is a conflict of signs and information from the woman. Using VEs sets time limits to the woman's labour; they seem to control the labour rather than allowing labour to take its own course. The midwives felt that VEs are an abuse and intrusive to women; they are to be used sparingly. Should the woman request a VE in order to help her focus on the stage of labour she is at, the midwives are willing to perform one.

VEs are not recorded on a partogram, as they would be in the institutional setting; partograms have no value for these midwives since they are the only persons providing care to the woman. In the institutional setting, one midwife can be caring for more than one woman so it is useful to share information about the woman's labour. Difficulties are experienced recruiting help in hospital because independent midwives do not use partograms; the professionals within the institution are expecting to see an action line on a partogram demonstrating lack of progress.

Knowing

The 'physical signs' are signs that can be identified by the midwives by listening, watching and asking. The theme of 'knowing' is connected with the knowledge midwives have and how they are able to interpret those 'physical signs' Figure 3 sums up the codes that are represented by this theme. 'knowing' begins to identify the way in which the independent midwives make decisions about the progress of labour. Many of the codes were dependent on each other, for example the interviewees felt that getting to know the woman is dependent on the style of care independent midwives give. The midwives relate how important it is to have a relationship with the woman and in trusting her, this facilitates partnership in care and creates a trusting environment where the midwife's intuitive skills flourish. These connections will be discussed below.

Research Knowledge and Physiological Knowledge.

These codes represented knowledge that was based on research findings that the midwives had read or physiology that they had noted in their experience and which sometimes contradicted published research evidence.

A number of midwives mentioned the research published by Albers (1999) which has strongly recommended that there is a need to revise the long held view that the cervix should dilate at 1 cm an hour in normal labour (Friedman 1954).

'I always think partograms are great in retrospect you know, also I mean, there's been some research brought out recently hasn't there that said that the 1 cm an hour is a load of rubbish anyway and that at best it's half a cm an hour.' (Margie)

'There has recently been that study in the States, hasn't there, have you seen it, two studies both 4000 women, big studies looking at I think it had been kind of challenging Friedman's curve, what ever it's called and have come up with an average rate of dilatation is actually 0.5 cm for primips so it's my defence for keeping my woman at home for so long.' (Mary)

The midwives see protocols within the NHS as a restriction on their practice; they see being up to date with research knowledge and their practice being evidence based as a way to challenge the constraints they feel are placed on them.

‘The research is on your side as I was just saying, you know, if you are up-to-date and aware of current research and your practices are evidence based, then you've got a lot of evidence on your side to push sort of NHS parameters.’ (Mary)

Animals tend to find dark, undisturbed covered places to give birth and observations have shown that women's contractions often disappear when they transfer from home to hospital (Newton et al 1968). Research shows that oxytocin is disrupted by the change in the environment (Leng et al 1988). This is something that is recognised by the midwives looking after the women in labour, they see it as important to be as discrete as possible when they first arrive.

‘So you would generally give a sort of settling in period knowing that anything new coming to someone in labour is going to put them off a bit, you know all that work on animals moving in labour, how they stop labouring, so you'd give some time for that to settle down.’ (Mattie)

‘When I first go to a labour, when I've sort of arrived, I'll do a lot of watching and observation and, and assessing from what they are saying before I do any palpations.’ (Maggie)

‘Most women, when they are in labour will start to try and find themselves a little pokey places in which to give birth or somewhere that they feel safe, they will make themselves a cave.’ (Meredith)

Experience

All the midwives felt that the ability to assess the progress of labour improves and becomes ‘honed’ the more experience you have. The midwives are able to rely on a concentrated watching of the woman in labour to judge what is happening and then confirm what they think is happening with their midwifery skills.

'The more experience you have the better you are judging what what's happening just from sitting in the corner and then you've got your midwifery tools that you can use to confirm'. (Mary)

'Over the years of sitting with women while they're labouring, I have, I think I honed it down fairly well.' (Meredith)

Experience also gives the midwife confidence that the labour will progress; it seems to be a reflective process of one birth upon another that builds that confidence of experience. So the midwife is able to assess that there is progress and feels content to leave the woman to progress without the midwife being present at that point in the labour. Experience seems to help facilitate clinical decision-making; a reflective cycle not unlike that represented by Atkins & Murphy (1993) can be seen in progress as the midwife learns from labour to labour, a trust in the process is developed. All the midwives had examples of this type of reflective development through experience.

'When you first started practising, you go and visit women very, very early in labour and sometimes when you get there, they are huffing and puffing, doing all sorts of things, and you think, "Oh what's going on here?" And then, within a short time of talking, they calm right down and you notice that things settle and contractions go off when you talk to her and really explore what's been happening, you can pick up that actually things are very early on.' (Maggie)

So yes, it's experience of seeing women in labour, talking to them and then seeing how the labour is actually developing. That, I suppose allows you the confidence to not rush out and visit them earlier and also having visited them and say, "I'll leave you know, you are doing fine.'" (Maggie)

Decisions about whether to perform a vaginal examination are made depending on the midwife's experience, confidence and whether the labour is progressing normally.

'I think that VEs are about confidence levels and experience levels, and safety levels.' (Martha)

Despite having lots of experience and confidence in the process, the midwives do not necessarily feel that they are experienced. This comment comes from Meredith who has

been a midwife the longest. She supports what Benner says about experts in practice (Benner 1984).

‘I think as a midwife, when I am going out to a birth, I mean it's like, everybody says "oh you're terribly experienced because you've been a midwife for so long and blah, blah, blah, blah", and yet I don't feel experienced.’ (Meredith)

Depending on their experience, the midwives’ practice will change. They feel that their experience as independent midwives has moved them away from a more medical model that they found working in the NHS. The model in the NHS was perceived by them to have narrow parameters of practice, this is supported to some degree by the evidence from hospital policies (see Appendix II, II a).

‘I think that's what I have in my mind, I have a framework that I learned which is the medical model but it's not the first line of assessment for me. So I think, working as an independent midwife changes it a lot.’ (Martha)

‘You forget, just how kind of narrow parameters the NHS midwives have and how as a result have got very little experience of anything else.’ (Mary)

The midwives identify that their experience will change their practice over time. As skills become more developed, the relevance of the various findings are put to better use in assessing the progress of labour. It is likely that reflection is involved in this process of development but that is not made specific.

‘But if I'm not sure, if I think it's ROA (*right occipito posterior*), or I think there's a deflexed head, I will try and work out sutures because I have learnt that that can be really useful. I must admit that when I was first qualified I used to think it doesn't really matter, it will just all resolve but I have learnt that if you know that's what you've got, you know, a deflexed head, you have to allow for that in your, sort of calculations and bits really.’ (Margie)

Experience of seeing other people’s practice also changes the way midwifery skills are used to assess progress.

‘I always thought it was awful, having this midwife sitting in the room watching and writing notes. I just thought that was horrible, I really try hard not to do that, so if I do stay there, very often eased away if I can, to another place.’ (Maggie)

The midwives' experience of the normal progress of labour can vary from what is written in the textbooks.

'I tend to find that it's probably your experience as well that, you don't really get in the textbooks, they always seemed to have this idea that dilatation and descent happen at a corresponding time, when in my experience dilation happens first and descent happens afterwards as a general rule'. (Mary)

All midwives acknowledged a strong connection between intuition and experience; intuition will be discussed later (page 108). The experience of looking after women in the past is then taken in the context of what is happening with the progress of labour in the present. This is then weighed in the light of the midwife's knowledge of the woman alongside what is being sensed. If the factors do not add up, this could suggest there was not progress.

'I think it's a physical thing, I think it is the response to previous knowledge of others in similar situations and your knowledge of the woman not in labour and seeing how she is in labour. So I think it's a mixture of what's happened to you before and your experiences and what you're actually seeing and hearing and possibly smelling and touching if there's a conflict. ...Though I think your intuition comes from some sort of interface between what is happening to you and 'n' women in the past and their experience and what's happening with this particular woman now'. (Mattie)

There are times when past experiences have a negative affect on the midwives' ability to assess the progress of labour. In the example below Maggie felt that a certain way of practising has been imposed on her, this has disrupted her usual way of practising. This is not to say that what was suggested is wrong but more to do with the way in which the change was imposed. If she is anxious about getting her action plan correct, this may have consequences for the quality of care she gives the woman and how she employs labour progress assessing skills.

'I had a very bad experience and have had to justify what I do, I do find myself writing all sorts of peculiar things in my notes that I wouldn't normally have written. This business about my plan of action and then I write this plan and then my gut feeling is that I don't always want to follow it, so it is difficult. I find it extremely, there is a conflict there, there

is a conflict between trying to be a person who responds to the woman and supports her and enables her and believes in normality and being a midwife who can justify everything that she's done.' (Maggie)

All the midwives acknowledged that the value of experience is something they take with them to all their births. It is also one of the components used in intuition, which will be discussed later (page 108). Experience can change the way the midwives practice as they reflect back to what they have learnt in the past. Midwives relate how bad experiences can be responsible for disrupting the process of assessing labour by the midwife losing confidence in her own ways of 'knowing'. The development of experience is also achieved using principles of reflecting on past events and gaining the confidence to making changes in the present, this seems to reinforce decision making about the process of labour. The last quote below describes how experience not only provides support from birth to birth but it is something that cannot be erased from the midwife.

'From experience from having been at lots of labour and having lots of women in labour. So you're drawing on your experience from previous labours and the more experience you have the better you are at judging what's happening just from sitting in the corner and then you've got your midwifery tools that you can use to confirm that it you think you need to. I think experience is something that you subconsciously take with you anyway, you can't erase it when you come to the door it will always be there with you and I suppose there are some situations where you might feel you've met the situation before and you're think back specifically to a certain case but I think generally speaking it's just kind of how your experience has shaped you, the way that you've practiced really.' (Mary)

Proactive Knowledge

This type of knowledge is used by the midwives and the women to keep the labour process going. If there appears to be an inappropriate slowing down of the labour, there are steps that can be taken to get the momentum going again.

The midwives seem to seek out knowledge that can help in this process. A statement from the Common Knowledge Trust in New Zealand (Common Knowledge 2001) encourages the woman and her partner to be aware of what is happening to the woman in labour and have developed various strategies to help the woman relax and allow the labour to continue.

‘There's usually something, or maybe just that there's a problem with in her that she can't quite let it go and we've actually been looking at some interesting stuff that is from New Zealand recently, called Common Knowledge and what they are working on is this whole business of the women learning about their own bodies and learning how to release the tension, the unconscious tension in their bodies.’ (Maggie)

The midwives say they instruct the women on positions to use in the antenatal period to avoid the posterior position (Sutton & Scott 1995).

‘We do quite a lot of work with the optimal foetal position in the antenatal period so that most of the time we have babies in that optimal position.’ (Margie)

Should the baby have adopted a posterior position during labour, it is characteristic for this labour to progress slowly with a lot of backache (Sweet & Tiran 1997). The midwife aims to conserve energy as well as coach the woman through the process, she maintains a careful balance of doing and being. Again, knowledge of physiology is important when advising on proactive knowledge, this compliments the assessing of the progress of labour.

‘A primip with a posterior labour where you know it's going to be tiring for the woman if it takes a classic picture, you can never be totally sure that it's going to rotate, the chances are quite high but you're really interested in conserving energy and working with the woman to make sure that baby can rotate, so physically you want to give her more tips about what she's doing with her body, if she isn't just intuitively adopting position that help that and you are really wanting to know that things are shifting.’ (Martha)

It may be necessary for the midwife to give the woman instructions rather than just allowing the process to continue such as in the case of an anterior lip of the cervix.

'You may need to be more directive and you may need to say okay let's get your bum in the air and get some weight off your cervix and give this anterior lip a chance to go away.' (Mattie)

Other suggestions can help the woman start up her labour again if for some reason labour appears to have stopped progressing.

A woman was getting extremely tired in the second stage, she'd just stopped the second stage, so I said, do you want to have a lie down, she then went on and started to push.' (Meredith)

Knowledge of the Woman

An important facet of assessing the progress of labour is the midwife's knowledge of the woman and the sense of trust and partnership that comes out of their relationship that has built up over time. All the midwives felt this was an important area of their care for the woman, even to the extent of not wanting to care for women unless they knew them in some way. This section cannot be covered without considering the value of the style of care independent midwives provide. The provision of continuity of care was one of the main reasons why the interviewees chose to become independent midwives.

'Continuity of care is the same person, the same midwife providing the care so the woman has the opportunity to get to know who it is, who is her care provider. It's more than just being the same person because it embodies the opportunity to establish a relationship, so continuity of care stands for the way in which the woman and the midwife get-together overtime, without much hassle, because there's continuity, because there's ongoing thing, you can then gently set up as relationship.' (Mattie)

By getting to know the woman in the antenatal period, the midwives have an understanding of the woman's normal behaviour before she goes into labour; the midwife is then able to judge whether the woman is in labour or not. The midwife being familiar with the woman's normal behaviour facilitates assessing the progress of labour. The midwives report that they can assess the quality of the woman's change in behaviour and interpret the progress more accurately.

‘Often just by talking to her over the phone, you can get some sort of idea whether it's just early labour or whether things are moving on a bit, just by talking to her and sort of listening to the way she's reacting and asking her questions about what things feel like and this is all sounds very vague but I think it is one of the things that you do because you've got to know this person.’ (Maggie)

The midwives are also aware of the impact that motherhood can have on the labour. They feel that part of their care entails exploring these issues before labour so that should it appear as a blockage during labour, they have strategies to deal with it. In this way the disruption of labour can be minimised because the midwife will already have begun to recognise what is happening. This type of care is met more easily within in a trusting, open relationship.

‘And it may be that you know there's something going on in her head, maybe its fear. Maybe if it's if her first baby, it about becoming a mother, is there an anxiety? So on those sorts of levels if it somebody we've known well through the antenatal period, they are areas that I will very specifically bring up, depending on the circumstances but they will be areas that I try and explore because I think it's a big one in our society, in any society but it's not necessarily sort of openly discussed anymore, it's just assumed that you are going to be a mother, or if you've been a successful career woman, or if you have been, doing what ever you have been doing for quite a few years, then that can be a big one.’ (Margie)

Knowledge of the woman helps the midwife to focus the support in an appropriate way. She will have an understanding of whether she needs to be firm with a woman over a situation or whether this is an issue that needs to be dealt with gently. ‘knowing’ and trusting the woman’s contribution is an important factor in being able to interpret other signs to assess the progress of labour. In not ‘knowing’ her well, the midwife resorts to a more medical model. It would appear that ‘knowing’ the woman is an important factor in feeling confident about the progress of labour.

‘I know when I don't know someone very well, if I'm just doing the labour which I rarely do I use the medical model more because I've got less to go on and in some respects I feel slightly more defensive in my patterns I'm less sure of the ground between myself and the woman and the couple ...it's really crucial that you know someone and by the

time I get to the labour I've got a fair idea of the sort of things that might be hanging around for that person, the sort of things I might have to have courage over, I might think I'm going to have to make sure that I don't get too soft in that area because that's not going to help someone get through the labour.' (Martha)

This relationship is important for respecting the philosophy that the woman and her partner have; it helps in the planning for the desired style of care. It also enables the midwife to be responsive to changes in plan; maybe it is the knowledge of the woman that helps the midwives to work with a sense of uncertainty (page 119).

'Its about knowing your client and I knew these people weren't smells and bells and going to be pushing the boat out, although they surprised me actually because they actually decided to do carry on at home at that point.' (Mary)

Getting to know the woman antenatally can bring up deep problems that the midwives see will stop the progress of labour. It is only something they can work with if the woman or the woman and her partner are prepared to acknowledge their difficulties. The issue is not necessarily to have a normal birth, it more the quality of the occasion that the woman comes through birth feeling empowered by the process in some way.

'I think it's terribly important to enable a woman to have a good birth experience whatever that experience end up as, we must work with them antenatally because you are building a knowledge aren't you, again, you are building a knowledge of that woman, of how she ticks and if she doesn't let you in, somebody I'm working with the moment she's had two Caesarean sections and she'll have the third one, I know she will, because she is not willing to work at anything and I am not a psychiatrist ... but I can't as midwife, help her past that. Some women will talk to me about it, and you're working then as a couple and you can suggest appropriate counselling.' (Meredith)

Partnership in Knowledge

The midwives are not the only people holding the knowledge of how labour is progressing. They all stressed how important it was that there is a partnership in the knowledge, a mutual respect of each other's different knowing of the progress of labour. Mary Cronk (2000), an independent midwife comments on the relationship between the woman and the

midwife. She identifies that the environment in institutional setting tends to evoke a more parent child relationship between the professional and the client. Within her own practice, she operates an equal relationship of adult to adult (Cronk 2000) confirming that sense of shared respect.

All the midwives acknowledged the value of the woman and her partner in the process of assessing labour. Again, this partnership of knowledge works much more efficiently where there is continuity of care, communication and trust.

The midwives identified that they rely on information from the woman and her partner very early in the labour process, the initial phone call made by the woman to inform the midwife that labour has started is taken seriously.

'They've, they've already told you, they've already rung you and spoken with you and given you some information.' (Mattie)

The midwives relate how they rely on the woman and her partners intuition as well as their own. This demonstrates the depth of trust they have developed between each other over time. The woman and her partner's contributions in sensing that labour is progressing are valued.

'Signs of progress that I would be on the lookout for are the sort of the gut feelings, both of the woman and her partner and myself.' (Margie)

'So also, the intuition of the woman and the couple is really important, as well, I do think that unless somebody has really got something really seriously going on for them, women are really good at having a sense of what's going on and they're really good at it. So it's a mutual respect for that inner place of knowing really.' (Martha)

On a practical level the woman can contribute to assess labour by relating the different feeling she is experiencing as labour progresses. Once again, these are valuable pieces of information for the midwives and make assessing progress easier.

'I think because of the way we work we really know who were working with, that makes a big difference, that makes things a lot easier and I think you have much more kind

open communication so very often I'll ask woman what they're feeling and that gives you good clues as to what is actually happening or she'll tell you what is happening if you give them an opportunity.' (Mary)

Martha's comment reiterates both of the points above, again demonstrating the respect for the woman's contribution.

'So I don't rely only on my own intuition, which is what it sounds like, I also rely on what the women is perceiving of her labour, both and her intuition and both what she's feeling 'cos women are really good at saying I can feel the baby moving, "I can feel my cervix stretching, I can feel the head rotating", they can tell you that. I've had women talk me through the physiology of their labour, it's just mind blowing, sending cold shivers down my neck as I talk about it.' (Martha)

Meredith's comments demonstrate how deeply the trust in the partnership can go; they can work as one. She is working with the woman in a difficult situation to ensure labour progresses safely.

'We actually had a shoulder dystocia and that was just absolutely an incredible experience for the woman and myself. We were completely working as one, as the birth had been, but until the shoulder dystocia, had been extremely, extremely fast. There was nobody else there, her mother who was sort of like half the size and eight-year-old and seven-year-olds.

As a result of knowing the woman and having developed a relationship of trust and respect through providing continuity of care, the midwife is able to enhance her ability to assess the progress of labour. She can confirm her intuition with the woman and her partner, she can ask the woman what she is feeling and compare it with her own assessment. The woman and the midwife have a level of trust so that if there is a difficulty, whether emotional or physical it can be discussed. This is all based on the type of care independent midwives provide. This group of codes have been put into a concept called communication and trust, which will be discussed later (page 125). It is one of the treads that the midwife and the woman carry with them through labour.

Midwifery Knowledge/Women's Knowledge

This theme was identified from one interview particularly; it was very intertwined with this midwife's philosophy on life and seemed closely associated with women's ways of knowing and women's knowledge but other contributors mentioned it to a lesser degree. The knowledge can be linked with the woman and that can be associated with the code of partnership of knowledge as discussed above, it is also connected with some sort of ancient knowledge, the knowledge women used in the past to care for women in labour. It also implies that certain communities in society do not accept this knowledge.

'I think I would link it with what I feel is very much an instinctual midwife, I would linking it with women, women's knowledge that goes back through the centuries. I would link it with the sort of knowledge that some would be burnt at the stake for because midwives were counted as having that knowledge and I think it is because we can link with women in a very different ways, it's a skill we develop but I think it's a skill that you have to have some seed of it within yourself.' (Meredith)

'I've been in some situations where I have felt that I've linked right back to an age old wisdom.' (Meredith)

Midwifery knowledge sometimes contradicts women's knowledge. Martha identifies Midwifery knowledge as a sense of some kind. In that she has used the metaphor of smell, it could be concluded that it is a blend of senses or knowledge.

'My midwifery sense of smell tells me that it's okay, and um, and that doesn't mean I won't listen to the woman, and it doesn't, you know if the woman's anxious you know, and I will talk to her about what she's anxious about and what will reassure her'.
(Martha)

Woman's knowledge is associated with the knowledge and confidence to give birth and this is being lost due to the way society is changing. If the knowledge of birth and the confidence in birth is being lost then this would have implications for the progress of labour, since the woman would not believe she could give birth and as has been discussed above, the woman would not give herself to the process.

‘But I do think, I feel we are losing women’s knowledge, many women these days don’t know that they can give birth, they don’t have that knowing within themselves but I think that’s our society is, overlaying it too much.’ (Meredith)

This sense of loss of knowledge is supported by Jordan’s work on authoritative knowledge (Jordan 1993, 1997). She recognised that a number of knowledge systems exist in parallel. People will use different types of knowledge depending on the situation encountered. She discovered this was particularly seen among the Yucatan people, during labour the women involved would draw on a number of areas of wisdom for each birth. They relied on past stories and experiences of those people present; this would include knowledge from family members, the local midwife, and other experienced woman in the village. All those present participate in giving physical, emotional, ritual and spiritual support. Should the labour become prolonged and difficult, all those present would contribute to developing a way forward. Their knowledge is shared, the woman being included in this process and a joint picture of what is happening in this labour would be constructed. Jordan points out that this contrasts starkly with western medicalised birth where the knowledge that is valued is the authoritative knowledge. This type of knowledge is accepted by the society as a whole, it is identified as the legitimate and official knowledge for deciding upon a particular action (Jordan 1997). This highlights one of the conflicts identified by midwives caring for women in labour. They respect the woman’s knowledge and contribution, however this way of ‘knowing’ is not respected by society as a whole.

Other midwives support Meredith in believing that all women have this knowledge and that it is associated to intuition and instinctual knowledge; all women can have it. This knowledge can be lost by fear, which suggests loosing confidence in this ancient knowledge. Midwifery and women’s knowledge is being able to interpret more abstract knowledge such as intuition. It is an ancient knowledge that seems to be connected with the eternalness of birth and the perpetuation of the human race.

'I think birth is a big part of woman's knowledge. I'm not saying it's all women's knowledge, you don't have to have or be at the birth to have that knowledge.' (Meredith)

'So, yes, it's a gut feeling, it's a sense that labour is fine, I think yes you can have it; anybody could have it so long as they haven't had it destroyed by fear and I think you can lose it when you're frightened and I think is what happened when I was training I lost a lot of it because of fear.' (Maggie)

'My feeling is that the ancient knowledge is there and my feeling is, this is just my gut instinct is that every woman has that.' (Meredith)

A wonderful metaphor used by Meredith provides a commentary on the change in the way society in the West reveres certain kinds of knowledge, notably the rise of the positivist, reductionist approach. The scientific, medical knowledge is respected whereas the more subjective knowledge has less esteem in our society (Jordan 1992). Meredith makes an interesting comparison between science and alternative science. She suggests that the smaller something is, the more powerful it is, it can cause damage or it can be used for healing.

'I mean, a baby girl in utero has all her eggs, I think she has all her knowledge too, as she's been born so many of her eggs die and so is a lot of knowledge. It's a different way round, I mean, I think we can look at it and link it in to what science is discovering, a bit like homeopathy isn't it, you know I mean, homeopathy was nothing until they split the atom, and yet it's working on the same sort of, the smaller the dose the more powerful the explosion or cure.' (Meredith)

Another metaphor was used to compare the uncertainty about 'knowing' and how 'knowing' is used to assess the progress of labour. Maggie alluded to the unpredictable movement of particles in quantum physics and although they have not been identified, their presence and effect has been acknowledged and their behaviour noted (Stengers 1993). In the same way midwives know that the process of labour is progressing but it is based on uncertainties, the midwives will sense that the labour is progressing but they are not able to articulate exactly how they know.

'I think there are lots of processes, energy, things that we don't understand that takes place and they are not scientific. Well maybe they are not the science that we

understand and maybe, you know, my son's into all this stuff about quantum physics and energy and things that I don't understand but it seems to be that neither do a lot of scientists. There are things that they are proving that they cannot understand and they cannot explain and I'm sure about childbirth is part of that process and the way people are, it doesn't always make sense and you can't always put into little boxes and that's a real problem and somebody turns around and says you after it and says why did you do that.' (Maggie)

Midwifery knowledge also has a practical side to it, midwives use it to assess labour in a very physical way. Midwives are also expected to know the woman they are looking after so in that respect, knowing someone is regarded as midwifery knowledge.

'The conscious things I suppose of the things that with my midwives hat on, I'm aware of. So those, those physical signs, that you might see the Rhombus of Michaelis, spouting of the anus it's those sorts of things I'll be looking for.' (Margie)

'Because the midwife knows the woman, she knows how the woman reacts to various stimuli and therefore can judge the woman's reactions in labour or going into labour, and help her appropriately because she knows what works, what helps.' (Mattie)

The above findings suggest that midwifery knowledge is very difficult to define; there is an eternal sense to it in that it is very connected with birth. If it is not acknowledged, women lose the knowledge of how to give birth. This knowledge is not confined just to midwifery, it seems to encompass much of what it is to be a woman and woman's knowledge and includes the more intuitive type of 'knowing'. It is very connected to personal philosophy as to how it is interpreted and there are suggestions that it challenges the type of knowledge that is recognised by the status quo.

Sense, Subconscious, Intuition, Instinct and

Energy/Power/Spirituality.

According to the midwives' accounts below, sense, subconscious, intuition, instinct and energy/power/spirituality appear to interrelate with each other, they connect with an unseen 'knowing' that cannot be verified in any way. The midwives found it difficult to define what this sense of 'knowing' was; nevertheless they referred to it frequently. This

section will discuss each code separately and will demonstrate that they all interact with each other in some way. Some of the issues that arise will be examined further in the discussion.

Sense

Maggie expresses the sentiments of all the midwives that sensing is not a definable quantity.

'So I think it's that sense and, it's very hard to put your finger on, but it's a feeling that she herself is not moving forward somewhere. She's stuck.' (Maggie)

From what the midwives have said, they take in all the 'physical signs' and before even putting their hands to the woman, they can sense that the labour is established. This suggests there is a connection between the ways the various 'physical signs' are being observed and what the midwife is able to sense. There is a quality of watching that can give a sense of progress of labour. The knowledge of the woman is also seen to be a contributing factor here.

'I'll do a lot of watching and observation and assessing from what they are saying before I do any palpations and if I have a sense that she is being in quite good strong established labour for a while I'll palpate.' (Margie)

The quote below has already been used in conjunction with midwifery knowledge (page 91). Martha enlarges on her metaphor of smell, she likens it to something cooking in the kitchen. Cooking will incorporate a number of ingredients and it is the blend of those odours that will indicate what is being cooked. In the second quote she has used smell to relate to intuition and 'spiritual stuff', whereas the first focuses on a sense of 'knowing' through her midwifery knowledge. This suggests that different situations in labour will give off different smells and perhaps with experience the midwife develops a good nose for the quality of labour progress.

'I'm aware that there are times when, for example when a woman might be quite anxious about her labour when she's in it and my sense of smell tells me if you like, my midwifery sense of smell tells me that it's okay.' (Martha)

'So for me that's a very strong, picture of what it, what the intuition was about, it's almost like smelling something. When you walk into kitchen and you can smell the cooking, I think in a way it's like the nearest you can, I think with spiritual stuff is the nearest you ever get really is metaphors, and, I think for me, it was like, smelling something from walking into the house.' (Martha)

Meredith uses the metaphor of an amalgam, a blend of different elements used to produce different characteristics in blend of metal. Different additive and proportions of additives will result in a change in the strength of the metal. This metaphor seems to have harmony with the blend of smells in cooking in that a different blend will result in noticing something different about the nature of the progress of labour.

'The sensing is an amalgamation of watching the woman's behaviour, how she's talking, the sound she's making, it's an amalgamation if you like, that's where you're picking the sense up and also, what I'm feeling on the head.' (Meredith)

Sensing can also be on a physical level, using the five senses to assess labour. It is not clear whether she meant a literal smell that defines the onset of second stage but taken in the context of the sentence that would seem the correct interpretation. At whatever level the sensing is performed, it is a mixture rather than one predominating.

'You use your hearing, your sight, and probably your smell. I always used to laugh when midwives used so say that it smells, to say that somebody smells fully. I don't know whether it's a smell or whether it's just and next mixture of all the senses coming in.' (Mattie)

Yet Mattie could relate another incident where she sensed anxiety when it did not seem necessary. All the parameters used to assess that everything was all right were in order but for some reason she called the paediatricians. Somewhere it was her sense of smelling and interpreting of various signs that alerted her to a problem.

'And I suddenly got really, really anxious, and call the paed, and the head was progressing and there was no reason, it was sort of like, I heard the fetal heart and it was fine, called the paed and by the time they arrived, which was something like 15 minutes later, the baby was being born wearing the placenta like a bunch of grapes on its feet, the baby came out really flat, but it was like such short time from when I had

heard it, it shouldn't have been flat at, even with those time limits, but I would never normally worry about not hearing the fetal heart with the head visible and progress. It was, it was really peculiar, but something must have alerted me to a problem, it was really, really, really I can remember the baby.' (Mattie)

This next example supports the one above; the midwife was surprised at the precautions she had taken to advise the woman and her partner about potential risks. The advice was more than she would usually give, to the extent of advising the couple to transfer into to hospital care. Her suspicions were confirmed over this case and she needed hospital support. She cannot define what it was that exactly alerted her to this potential problem.

'What I would, probably usually write risks of meconium discussed, not risks of meconium aspiration discussed and paediatric advice would be to transfer in, which is what I wrote in my notes which I've never, ever written before ever, I mean it sounds really heavy doesn't it, I'm really surprised that I wrote that.' (Mary)

In the following example the midwife is able to uncover some of the process of sensing progress. She used the more formal examination to help train her to tie all the various signs together in a meaningful way. She was able to include the more abstract sensing in that training.

'I'm not advising everybody that they should stop doing internal examinations, because I learnt to tie up what I was seeing and sensing with what I was then able to feel with vaginal examination.' (Meredith)

Subconscious

This code was not always easy to identify, it was used interchangeably with intuition and instinct but because four of the six midwives interviewed referred to it as something that was distinct from intuition and instinct, it has been included. Assessing the progress of labour is performed on at least two levels, there is a conscious and subconscious level

'Well I suppose I use lots of different methods, none of which are, some of which are conscious I suppose and some are not, some are more on the subconscious level.' (Margie)

She was asked to identify these conscious and subconscious methods, the conscious ones were volunteered quickly.

‘The conscious things I suppose of the things that with my midwives hat on, I’m aware of. So those physical signs that you might see, the rhombus of Michaelis, pouting of the anus it’s those sorts of things I’ll be looking for. (Margie)

It was not until she had been gently prompted on two separate occasions that she finally volunteered what this level of ‘knowing’ meant to her.

You talked about the, the conscious and the subconscious, you still haven’t gone much into the subconscious? (Researcher)

‘I suppose because it’s subconscious and it’s a sense I think, its just a, for example this birth that we have just had.....’ (Margie)

Here she associates subconscious with sensing and gives an example of a birth that illustrates the point, whereas in the earlier quote she had listed the physical signs with no difficulty. It appears that sensing, subconscious and intuitive skills are more difficult to express, they are usually represented by an example of a situation that has taken place or a metaphor.

The quote below suggests that the subconscious is a storage place for experience that cannot be erased and can be accessed during a labour.

‘Well (experience) I think it’s something that you subconsciously take with you anyway, you can’t erase it when you come to the door it will always be there with you.’ (Mary)

Other midwives supported experience being located in the subconscious; they also suggested that the instinctual and the subconscious might be closely related in some way or they could be the same thing.

So what is instinctual, what does that mean? (Researcher)

‘I don’t know, I don’t know. It’s what we discussed, we don’t know whether it’s because you have experience somewhere along the line that given a particular circumstance that you recall that from your subconscious or whether it’s, I don’t know, I can’t separate the two.’ (Meredith)

Other midwives related the subconscious and instinct to each other. There was also a suggestion that their philosophy of normality is in some way connected to that subconscious place which would affect the instinct or output from the subconscious.

So um, my impression of what you're saying is that there is, subconscious is like a foundation and its that this belief about the normality of birth, and so therefore when you go to labour, to assess the progress, you are coming from that platform of normality. (Researcher)

'Yeah, yeah.' (Margie)

And expectation that it would progress, I hope I haven't put words in your mouth? (Researcher)

No, no, I think yeah, I think that is what I'm saying, yeah. (Margie)

So that the expectation, and the rest will inform that subconscious. (Researcher)

'And depending on what then goes into that, then from that I might have an instinct that, hang on a minute, perhaps. I think.' (Margie)

The midwives encourage the women to resort to a subconscious noise rather than a contrived, consciously taught noise. This abandoning to some unknown, subconscious 'much more animalistic, sort of very primal, kind of sound noise' (Martha) facilitates the progress of labour.

'Some women, if they've been to some birth classes will actually consciously make a noise and I just say well, don't do that you need to allow the noise to be totally subconscious and to just erupt from you, and it will need to be a sound you have to make.' (Meredith)

From the above extracts it can be seen that midwives gives out an instinct or output from their subconscious. There is some sort of connection between the instinct and the subconscious. What comes out from the subconscious has been influenced in some way by the midwife's philosophy of childbirth and experience. This suggests that when considering how an individual interprets the progress of labour, it is relevant to understand something of their philosophical disposition.

Spirituality/Power/Energy

It seems appropriate at this point to bring up issues relating to philosophy. Philosophy is the way people seek to understand the world around them, the framework they have for viewing life and interpreting the world around them (Sykes 1988). All the midwives hold the belief that birth is a normal event of life and examples of these will be given below (page 123) but superimposed or alongside are other beliefs about life and spirituality. These are richly illustrated by various metaphors the midwives used such as spirituality, energy or power. This also has an affect on the way the progress of labour is interpreted. On occasions, the manner in which progress of labour is perceived is dominated by their philosophy.

Meredith provides a most striking example, as well as using the 'physical signs' and the ways of 'knowing' described previously, she relates how she has an ability to physically sense on her own head the amount the cervix is dilating in the woman she is looking after. She explains that this would be the same feeling baby would feel on its head as dilatation took place as labour progressed.

'The other thing I also find it is that a bit wacky is um, that particularly if the baby's head down, I can feel the dilatation on my head, that's if I know the woman well enough to link in with her.' (Meredith)

This process of assessing labour is closely connected with her relationship with the woman; she believes she can link with them in a spiritual or perhaps metaphysical way to sense this progression. From her belief about life, she feels this linking ability gives her access to knowledge from past lives.

'I've been in some situations where I have felt that I've linked right back to age old wisdom, I know there was one birth where I pictured myself as being behind a rock, in a cave and I was just watching somebody give birth.' (Meredith).

She is realistic about it in some sense because she considers it 'wacky' but if this type of alternative, spiritual knowledge was more acceptable, would she have developed a more plausible way to express herself within her profession. She did relate earlier how she had learnt to connect what she was feeling during a vaginal examination to what she was sensing of the woman's progress. It may be that she has developed this skill very well. On the other hand, she could be 'wacky' as she has said but her practice does not support this, she has had a successful practice for 11 years, in that she has been the main breadwinner for her family. Davis-Floyd and Davis (1997) support this connectedness when they interviewed home birth midwives in America. The midwives reported that the connection between them and the woman was not only to the 'psyche and emotions but also physical sensation and experience' (Davis-Floyd and Davis 1997:325).

Meredith's belief that this process is working has been confirmed by practical evidence, but her uncertainty about its acceptance has not necessarily reinforced it as a valid method of assessment.

'I get this feeling, I don't trust it is particularly, although I kick myself for not being able to trust that but other midwives have watched me and they often see me with my head in a particular position and when the baby comes out its got a nice little big caput in the position and I'm trying to link in with the baby, trying to correct that position.' (Meredith)

This level of connecting or perhaps linking appears to be disrupted if it is not a reciprocal relationship there. This connectivity requires agreement.

'And sometimes you don't really feel like you've connected at a level with the woman that allows you to make those kinds of judgments and I would, I would say that for me, that's kind of intuitive spiritual type of stuff.' (Martha)

The other midwives echo some of what Meredith has said, though in this example intuition and spirituality have been linked together. For Martha has a more traditional spirituality and how useful it is depends on how focused she is.

'I would say my knowing place and my intuitions are synonymous for me but I would say that's kind of how I hear, that's how I hear the voice of God in me, yeah and so if I'm not paying attention to that, then I'm not able to trust my intuitions so much.' (Martha)

From their interviews, Davis-Floyd and Davis (1997) also identified a strong connection between spirituality, sensing and intuition; the midwives contributed a wide spectrum of places where the voice seems to emanate from. It is as close as an inner voice or as vast as being connected with the universe.

There is also the recognition to respect the spirituality of the people in their care and to allow it to be part of the decision making process. The information provided by medical knowledge did not help this particular couple to choose that option, they needed a deeper sense of trusting from another source.

'There's something about respecting the spirit of, for me the spirit of God in the other person and their own sense of that.' (Martha)

'I can remember one couple who we looked after, I remember when her waters broke, a while before she went into labour and we talked about the options for her and the parameters set by the hospital. I remember them, both the woman and the husbands saying "even having those parameters wouldn't actually make us feel any better, yes we are a bit anxious, that actually isn't going to settle us down." 'They were very aware that the place they need to settle was in a deeper place and for some people that information wouldn't do that. So I think you've got to be careful because everybody is a bit different but for that couple, they felt they need to trust in something a bit more than the technology.' (Martha)

This spiritual or energy level knowing can be disrupted by events of disagreement and here Maggie testifies to how this has happened within her practice. Again, she relates it to the philosophical outlook on life and in her case it is the normality of birth, which also incorporates trusting the woman and the unseen process. It is strongly connected to intuition as well.

'I think it is to do with experience and I think it is to do with your framework. So the more you can maintain a framework of normality and framework of trusting women and of trusting yourself, that allows your intuition to work and I think when you lose that, that goes. Your framework of beliefs about childbirth and women, life and energy and all

those things that can't really be explained. I mean, we've found a very interesting thing that when things are not comfortable in our practice, we get lots of difficult births and when things are comfortable in the practice and we're all working well together, we get more normal, straightforward births and that's quite difficult to explain but it certainly has happened. So I think there are lots of processes, energy, things that we don't understand that takes place and they are not scientific.' (Maggie)

As with intuition, instinct and spirituality, the midwives generally find it impossible to define childbirth. It includes both the midwives' and the couples' outlook on life along with the different way labour can progress physically, it would seem there are an infinite number of the ways the people involved can experience the progress of labour. The midwives relate how they feel they have been pressurised to account for their practice but because there are so many differences between each birth it is not always possible to define in the terms that have been made explicit from the institutional setting.

'There are things that they are proving that they cannot understand and they cannot explain and I'm sure about childbirth is part of that process and the way people are, it doesn't always make sense and you can't always put into little boxes and that's a real problem and somebody turns around and says to you after it and says why did you do that.' (Maggie)

The 'somebody' in Maggie's quote is alluding to the expectations of the institutional setting, which require a more scientific proof. Where as the midwifery practiced by the midwives is content with a sense of uncertainty. Uncertainty is covered in a later section (page 119).

Instinct

Instinct is another code that the interviewees found difficult to define. It has all the mystery surrounding it that spirituality and subconscious have. The interviewees identify that all these terms are interrelated and connected in some way. On occasions they appear to be used interchangeably with each other. Instinct seems to be associated in some way with the midwives philosophy of childbirth and in that respect is identified by Margie as something that is rock solid and sure.

‘And so I still have a really, rock bottom, strong, sure instinct that birth as a process is a normal, safe, life event.’ (Margie)

Instinct appears to be a very powerful force; it kept Maggie through what she saw as a very difficult training. The quote below suggests that despite the difficult environment of her training within the NHS, her instinct to become a midwife was the correct decision; her instinct maintained her to the end. She suggests that instinct guided the important decisions in life.

‘You know, like my decision to become a midwife its one of the most difficult decisions I made and I must have nearly left 20 times but there was an instinct that kept me there, something that held me there and it was right. So it's, to do with probably the really important things in life.’ (Maggie)

Despite the fact that the respondents identified instinct being very important, on occasions they struggle to separate it from the other term such as intuition and subconscious. This is not surprising since in the past as Meredith points out:

‘I would link it with the sort of knowledge that some would be burnt at the stake for.’
(Meredith)

In the previous section on the subconscious, the midwives identified instinctual as a response to experience recalled from the subconscious (Martha, Meredith).

In trying to explain the difference between instinct and the subconscious the midwives think that instinct is on a different level from the subconscious and is less constant. The subconscious seems to be a processing place at the lowest or deepest level, it is constant and it receives information. The subconscious will process information and then inform the instinct. There is a close relationship but they are different.

So you've talked of subconscious and you've talked of instinct, are they the same? (Researcher)

I'm not sure actually I think the instinct maybe it's a slightly different layer. Maybe the instinct is a more, subconscious is a sort of, I don't know in my sort of image I suppose, my subconscious is a constant that receives information and then it's almost depending on what I'm receiving, perhaps at that level, will then inform my instinct, perhaps. So

that, if I am going in and I'm seeing something and I might think, everything might seem to be okay but I might have, just an anxiety. I think that's the way round, I think that it's almost like the subconscious is always there, and occasionally from that level something will prick my instinct, I think, so they are very closely related but they are slightly different things.' (Margie)

In the above quote, the subconscious is regarded as more 'constant' than the instinct, instinct must be fairly firm in nature because Margie has a 'rock' solid instinct that child birth in normal and it was a strong instinct that took Maggie through her difficult training (page 110). In the quote above Margie said it was 'rock bottom strong' but that may be the feeling the instinct gives out when it is activated.

The sense that instinct is an output is also supported by others, it is regards as an action without rationalising, where as intuition can be rationalised through experience or it is some form of communication or input.

'I think your instinct is to act in a certain way without rationalising things, whereas I think you can rationalise with intuition. You can put everything together and I think, I think experience does have a role to play in intuition, where instinct is an instinctive reaction, does that make sense?' (Maggie)

'It's an instinct it's a hearing something and responding to it and trusting what you have heard, not thinking about it to. Because if you think about it too much and try and analyse it, then you lose it. So it's that going back to that sort of instinct or the subconscious or what ever, may be what happens is it drops down into your subconscious. It goes, "yeah, that's good, that figures" and then back up to the instinct and say's I know what to do or whatever.' (Margie)

From the above it is suggested that instinct can be lost though over analysing, other contributors feel it can be disrupted through fear and anxiety that something may go wrong. This would suggest that trusting it would reinforce an instinct and strengthen it. It seems the institutional setting can cause this fear and loss of instinct. The women lose their instinct for normal birth as well. By removing the fear instinct can be restored.

'I think is what happened when I was training I lost a lot of it because of fear. You're so overlaid with all the issues around what could and might happen and you should be

doing that you actually lose it and I'm sure this is what happens to women there. It's like women lose touch with their instincts to give birth. Because they are frightened and the more you can sort of removed the fear and get back to what's really happening, you can lose your instincts and the woman can as well.' (Maggie)

Instinct is within each of us and will come out in the right circumstances. It is connected to ancient knowledge that is passed down through time.

'I think I would link it with what I feel is as a midwife and very much an instinctual midwife, I would linking it with woman's knowledge, that goes back through the centuries.' (Meredith)

'My feeling is that the ancient knowledge is there, and my feeling is, this is just my gut instinct is that every woman has that.' (Meredith)

Intuition

All the midwives seemed to have experienced using intuition, intuition was associated with instinct, subconscious, sensing and experience. It is also closely linked in some way to the term gut feeling, these two terms being have been used interchangeably, however, on a few occasions it has been attributed to instinct.

Intuition can be a sense that labour is progressing well, it can also be a feeling that something may be wrong. It seems there may not be any clinical evidence that there is a problem with the labour, yet the midwife will act on that gut feeling. It appears that intuition is open to being criticised or derided within the institutional setting as in the case below, the midwife was initially thought to be 'barmy' but her feelings were proved correct in this instance.

'It's just a gut feeling and, it's very hard to defend and very hard to explain but I have felt it and I know some of my colleagues have felt it; you have an intuition that everything is fine and it's all doing okay and equally, the opposite. I transferred a woman in once who was only having slight decelerations and everybody thought I was completely barmy, but in fact her baby did die. Now, at the time I mean, it was, there was no real justification, it didn't look particularly worrying and she was actually about 8 cm but I'm

awfully glad that I did. So yes, it's a gut feeling, it's a sense that is labour is fine.'
(Maggie)

Throughout the data, the midwives consistently emphasised how important partnership with the woman and relationship contributes to assessing labour. This partnership is stressed once more in the context of intuition. Not only is the midwife's intuition significant but the woman and her partner's contribution is valued as well. There is a sense of equal partnership in 'knowing' and mutual respect for each other. There is a caution however, should the woman's place of 'knowing' be disrupted, her intuition is not to be completely relied on.

'The sort of the gut feelings, both of the woman and her partner and myself would be considered. The way in which a woman moves, the way in which she is, how much she is still out in the world, how much she is able to communicate with me, how much she is disappearing inside with the contractions and then sort of coming out.' (Margie)

'The intuition of the woman and the couple's really important, as well, I do think that unless somebody has really got something really seriously going on for them, women are really good at having a sense of what's going on and they're really good at it. So, it's a mutual respect for that, that inner place of knowing really.' (Martha)

One difficulty with this is assessing when the woman's intuition has been disrupted enough for the midwife not to listen to the woman. This may be the value of their relationship and the style of care; the midwife has got to know the woman in the antenatal period as well. It may be further supported by the change in 'physical signs' since all signs are considered when making an assessment of progress.

'Intuition I think is, I think it's a physical thing, I think it is the response to previous knowledge of others in similar situations and your knowledge of the woman not in labour and seeing how she is in labour. So I think it's a mixture of what's happened to you before and your experiences, and what you're actually seeing and hearing and possibly smelling and touching if there's a conflict. (Mattie)

Both past and present experience seem to have some impact on intuition, though it is not always clear exactly what triggered the intuitive moment. In the first comment the midwife

was about to leave because the woman appeared to be in early labour but for some reason she just thought she would check and the woman was ready to give birth. This sudden 'knowing' suggests that there is some sort of subconscious element involved in intuition.

'I just thought, I'll examine you I'll just check, but she really didn't look as if she was in labour and she was fully, and you know, gave birth about an hour later, I, I very nearly went away, so that there are no hard and fast rules'. (Mary)

You said an interesting thing then, you said for some reason I examined her, you are able to say... (Researcher)

Yeah, intuition, intuition, yeah.' (Mary)

'I don't know much about how you can tell you are using your intuition but sometimes you just seemed to know that somebody is not getting on and when you try and look back and think, there wasn't really any physical sign, I wonder why I started listening in to the baby every five minutes because I can't recall there being a good reason for doing that.' (Mattie)

Other midwives developed the concept of smelling further. This quote has been used in the context of senses and a blend of smells. Examining it in light of intuition there are particular situations that can be picked up.

'That's a very strong picture of what intuition is about. It's almost like smelling something, you know when you walk into kitchen and you can smell the cooking, I think in a way it's like the nearest you can, I think with spiritual stuff its the nearest you ever get really is metaphors and, I think for me, it was like, smelling something from walking into the house.' (Martha)

Martha further develops the idea of smelling and intuition. If intuition is a real knowledge or knowing about something then it is not always going to be a pleasant smell. In this case, Martha relates how she sensed that the baby would die before it was even born. The baby was born with a large heart defect and died a few days after birth, there was nothing that could have been done to save the child.

'I think it's something about intuition and there's something about being prepared to really smell what you can smell and not wanting to make it is different. So, because sometimes if you smell something you don't like it, you don't want to smell it, it's too strong, its too powerful like that death thing, I could have ignored it. I could have completely dismissed it even and you can romanticise it. But I think there's something

there that challenges you to just hold it. It's a bit like life and death isn't it, people will die whether I like it or not, people will have sections whether I like it or not, people will have tears whether I like it or not, babies will come out needing a bit of help whether I like it or not. There is something about intuition I feel that if you're not allowing those realities to be in place then my intuition gets skewed because what is happening is I'm wanting to bend to what I'd like or what I think the woman would like or what I think in my brain the people are going to judge my practice would like.' (Martha)

She warns against romanticising about intuition and to take it seriously, she believes it to be as valid as factual knowledge and to be prepared to respond to it responsibly not to just follow it if the news is good. If intuition is real and factual or if we believe it in our own set of values for life, then it has serious implications for us as midwives if we do not follow it. Our midwifery code of conduct (NMC 2002) would require us to be trustworthy; we also need to be trustworthy with the knowledge we perceive from intuition. If the knowledge gained from intuition is reliable and true enough, we should not compromise it for what others think we should do. Her comments indicate that she believes that intuition has substance rather than being something more ethereal. It suggests objectivity and fact rather than a hunch or a feeling. It requires integrity and demands an appropriate response at a professional level.

This is echoed by Maggie's recent experience with the way the midwives in her practice have been dealt with (page 104). The demands of the institutional setting can go against what the midwife is feeling in her gut, it sets up a conflict and so makes the environment troubled. She has been asked to produce an action plan which has no context within the way she practices, her gut feeling is not to use it but she has to comply which has set up an internal conflict.

'You know this business about my plan of action, um, and then I write this plan and then my gut feeling is that I don't always want to follow it, so it is difficult.' (Maggie)

Along with experience, other components influencing intuition are the midwives' trust in the philosophy of normal childbirth and the belief that women have the ability to give birth. If this is lost, so is the ability to assess the progress of labour using intuition.

'I think it is to do with experience and I think it is to do with your framework. So the more you can maintain a framework of normality and framework of trusting women and of trusting yourself, that allows your intuition to work and I think that when you lose that, that goes.' (Maggie)

In order for intuition to be operational it is important for the midwife to be focused and centred within herself. If this focus is disrupted then the knowledge of labour is disrupted. Also there is a sense that knowing the woman is another component that has to be present. This again reinforces the value of the style of care that is given by independent midwives. If these components are not in place, the medical model is a fallback for assessing labour.

'I think there are times when you just feel much more centred within yourself and you can you've got much clearer vision about what's going on then there are other times when you are confused about it and you have to use the medical model stuff because it gives you the clarity that your intuition isn't giving you on that occasion. Sometimes you don't really feel like you've connected at a level with the woman that allows you to make those kinds of judgments and I would say that for me is kind of intuitive spiritual type of stuff.' (Martha)

The final quote below provides some of the pieces that fit together to show how intuition and instinct work.

'The difference between intuition and instinct, another fine dividing line isn't it, instinct and intuition, intuition is like a knowledge that comes like a communication from somewhere to you. I think, I think the two of very, very link, I know there is a difference, how can I put into words? Instinct is when I have to, instinct, I think instinct is more of doing things.' (Meredith)

Summary of the elements involved in using Intuition

A model is beginning to emerge here of how instinct, the subconscious and intuition work together. Intuition is an input, a gut feeling or an emotional response. As Martha suggests, this input is somehow taken to the deep level of the subconscious and processed. This is

also where experiences are stored which cannot be erased (Mary). From here, they all recognise experience as having some effect on the process in some manner. The output from this initial intuitive moment is identified by the midwives as an instinctive action of some sort. So intuition informs the instinctive action, the decision that is made about whether labour is progressing or not. These areas are not clearly separated and there appears to be some overlap. Intuition should not be over analysed (Martha) otherwise it is lost but should be trusted and acted on, see Figure 6 below.

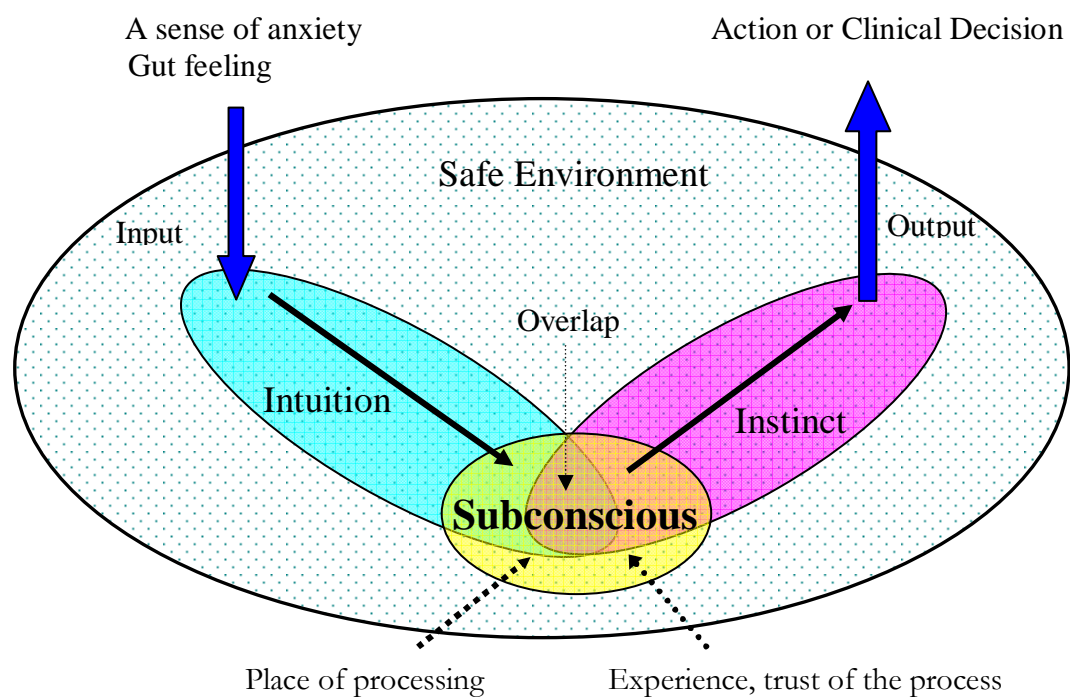


Figure 6. Interaction of Intuition, the Subconscious and Instinct.

Other important factors are that the environment should be trusting and peaceful and the focus of the expectation is that birth is normal. A fearful environment and conflict disrupt the use of intuition in assessing the progress of labour.

In the light of the above discussion, the following quote, although not using the word instinct or intuition could be interpreted as though they contained them. One of the midwives was prompted to do something, she does not know why, the other experienced an emotion, which was responded to by acting out of character.

‘I tend to examine if something happens or, I’m not even, I don’t know what prompts me to do them really.’ (Mary)

But you sometimes suddenly feel anxious about something and you do something that a bit out of character for you.’ (Mattie)

The anxiety or prompt is processed in the subconscious and there was some sort of action or behaviour out of character.

Summary

‘knowing’ draws on a number of areas of knowledge to assess the progress of labour and facilitate decision-making. These include the more conscious, objective knowledge such as research and physiology. Proactive knowledge is used to facilitate the progress of labour and the midwife uses the experience she has gained over the years. During labour, the process is reflected on in the context of this knowledge.

Other important facets of ‘knowing’ are the knowledge of the woman, this also encompasses partnership in knowledge; in that the contribution the woman makes is valued and respected, the women are also involved in decision making and planning their labour. This type of relationship is based on the style of care the midwives give. The women and the midwives’ belief in normal birth gives them positive expectations of birth, it opens them up to an ancient knowledge that gives the woman and the midwife confidence in the woman to give birth.

Intuition, instinct and the subconscious work together to form a vital area of ‘knowing’. Midwives and the women are able to pick a gut feeling of how the labour is progressing

and respond appropriately. All the decisions take place in an environment of trust and partnership with the woman. The process is disrupted by fear, by disturbing the surroundings the woman labours in and by criticism of clinical decisions when the midwife transfers into hospital (see Figure 8).

The Woman in Labour

The first two themes are drawn upon by the midwife to assess the woman in labour, in a sense they unfold or unravel as labour progresses, as they apply them to the labouring woman. This theme consists of codes that are intimately associated with the 'woman in labour' that follow her along the process of labour. They are threaded through the labour consistently and closely interlinked with each other (see Figure 4) and if the threads are broken, it would appear from the midwives' accounts that assessing labour is disrupted. These threads provide an environment from which the themes of 'physical signs' and 'knowing' can be interpreted.

Immersion

This code was originally identified as 'quality of watching' but it became clear that the midwives were prepared to do more than just watch the labour. There seem to be two forms of watching, one more associated with the institutional setting.

'I used to watch, when I was training and working in the community, they would go out and stay with women from about four to five cm. I always thought it was awful, having this midwife sitting in the room watching and writing notes.' (Maggie)

The quality of being with a person has been noted by Siddiqui (1999), a midwife 'may be physically present but deficient in presence' (Siddiqui 1999:112), suggesting a lack of commitment of the midwife to the moment of labour. Whereas the type of watching the independent midwives seeks is a far more intimate connection, a preparedness to absorb

the surroundings but not intrude, becoming one with the process in progress. In some respects, the midwives allow their senses to be soaked in what is happening.

‘I suppose I, what I'd try and do is tune into to what the woman is doing on a level of not a direct communication level.’ (Maggie)

‘I mean I think there's a lot of attention, you know it's really attentive listening.’ (Margie)

‘And then when I get there it's very much, there's a thing about being still and giving your time to listen to the labour, um, so listening to the labour, and listening to the woman, and I think I'm only becoming newly aware of how much you pick up in your own body and about the body you're with, and that sounds a bit disconnected, but I think that, some other, one of the things that we, that I think that, that midwives, particularly independent midwives, but I think probably to some extent all midwives is that you do you actually listen to bodies, those kind of things tell you quite a lot.’
(Martha)

‘So, absorbing, absorbing you also becoming part of the scene by absorbing, you're letting the information that you are receiving from your senses wash over you but you're also becoming part of the scene so you're becoming absorbed into it. Which means that you're not intrusive; you're not obtruding, obtruding? Intruding? Intruding. You're not intruding on the situation, your becoming part of it, which probably makes it easier for you to observe without the woman's looking like feeling like she's in a goldfish bowl being looked at, that's probably what I meant by absorbing.’ (Mattie)

Trica Anderson, an independent midwife herself; from her study of women's experience of labour, highlights that the midwife who facilitates an ‘unobtrusive atmosphere’ enables the woman to feel safe enough to abandon herself to the process. Where as the ‘intrusive’ midwife disables the woman turning her birth into a ‘nightmare’ (Anderson 2000).

This ability to be immersed and to interpret the labour improves with experience. It would seem the more experience the midwife has, the less she does or appears to do. This may be that there is more confidence in the process or she is better at interpreting the signs of progress by being absorbed rather than confirming by some other process.

‘The more experience you have the better you are judging what's happening just from sitting in the corner and then you've got your midwifery tools that you can use to confirm that it you think you need to.’ (Mary)

'You do spend a lot of time observing, quietly observing, not probably appearing to do very much.' (Mattie 20 years a midwife)

The impression may be given that the midwife is not doing very much but the process is being carefully watched and interpreted.

'I maintain I'm a midwife because I'm a very lazy person and like doing absolutely nothing, in nice warm places.' (Meredith 25 years a midwife)

'But you can watch a woman and she will, at the start of her labour she will be gathering energy from everybody, everybody around her. Then the realisation comes that it's actually hard, that giving birth to the baby is hard and it's only she who can do it. I often see it as a light that is like one of those fibreglass lights. That's how she starts labour and then as she goes into labour, it becomes much more a channel and if you are actually thinking on a spiritual side of things, what you are doing is allowing a soul to come to birth through you. And so birth ought to be spelt BEARTH as bringing to birth, it's a shorting of bringing to birth a new soul. So, I often watch women and I can see a light coming and when it's like a pencil and it's right through them, they are not far away from actually being able to birth their babies then. It's not there for every birth and sometimes you are in it as midwife with them.' (Meredith)

The midwives and the people are with the 'woman in labour', sustaining the woman, enabling her, giving her words of encouragement and enabling the type of environment where she can go into her 'cave'. As she focuses in on herself, it is as though the process becomes self-perpetuating and perhaps from a biological sense, a positive feedback mechanism (Tortora and Grabowski 2000), the woman abandons herself to a process that does not stop until a new life is brought forth. All that the midwife asks of the woman is that she gives herself openly to that process and allowing sounds to 'erupt' from her depths.

'Probably the way the women are most helpful to you is because they accept you, they don't act, they don't need to act in front of you, so you getting, you're getting the real woman response, you're not getting how she feels she ought to behave. The women are pretty good at dissemblance but you don't want them to do that in labour.' (Mattie)

Being immersed in the labour is an important aspect but as with all the other issues discussed there is a need to be responsive to the individual situation and so there is no certainty of what is required of the midwife at each birth.

'So that was very interesting for me how she dealt with that and how, just by visiting her and talking to her it sort of got her through the labour completely. At other times you go somewhere and you stay there, and it's almost as though your presence slows things down, I don't know, it just feels like that sometimes.' (Maggie)

Uncertainty

This last extract introduces another of the threads that carry on alongside the woman in her labour. It has already been mentioned under the section 'knowing' (page 79) and the theme 'physical signs' (page 54)

'I'd say, nine times out of ten that's very accurate but I'd say they are some women, and you haven't got a clue.' (Martha)

'They are very good clues as to what the woman were doing aren't they, very often, not always, is not a sure fire certainty.' (Mary)

'So you are aware that it is not a full proof method.' (Mattie)

From the above statements, it appears that the midwives almost plan for uncertainty; it seems to be a constant companion of the midwife and the woman throughout labour. The midwife, with all her knowledge to interpret 'physical signs' cannot and does not want to predict the outcome of labour yet this is not something that disrupts labour for her or the woman.

As a result of not having any fixed guideline, the midwives describe how they work in an environment of uncertainty. They also testify to the fact that the process of labour is uncertain in itself, it is not possible to predict outcome or time limits but there is a conviction that labour is a normal event (see page 123). For every guideline they have, there is a remark that reinforces that uncertainty but it seems they are confident working under

those sorts of conditions. Again, some of the quotes have been used already but in another context.

Strong contractions are usually an indication of good progress, yet this can be deceiving and so can the reliance on the noises women make.

'Sometimes I find women confuse you because they have quite short contractions, but it seems to do the job.' (Maggie)

'Noise gives very good clues as to what the woman were doing, they are very often not always a sure fire certainty.' (Mary)

'The way she's breathing to some extent how far on she is in labour, now I'd say nine times out of ten that's very accurate but I'd say they are some women and you haven't got a clue.' (Martha)

'I've known what their voice sounds like and so I can pick up initially from than, it doesn't always work.' (Meredith)

'I have learnt you can have all sorts signs of imminent second stage and it's absolutely no where near.' (Margie)

There are some cues that act as warning signs to the midwife but they are not always certain either.

'I was picking up for some decelerations during contractions and I kept thinking this isn't right, this isn't right and I really didn't think she was fully dilated but of course she was, she was actually moving into pushing and that was what I was picking up.' (Maggie)

There is not the expectation that they will get it right, they almost program into their care that there is room for mistakes.

'Its, its not easy, and I think you, you have to be honest and say you can get it wrong, however you set out to do it. Its, its mostly by an overall view of what happens.' (Mattie)

'I suppose so, but I think it's not completely fail safe, because there are always woman out there who are going to do something completely different, there is always the opportunity of being caught out.' (Mary)

Even the formal VE does not provide a certainty that labour is progressing.

'So it only gives you an incomplete picture, which might be helpful if you are trying to work out if somebody in labour or not and you do a VE and the cervix is closed then you can be pretty confident that they are not but you know, it's not often that it's going to give you much useful information.' (Mattie)

'You are aware that it is not a foolproof a method but why, if you don't need to do any other things then there's no point in doing them because time will tell, so you know, while you can afford wait.' (Mattie)

It is by interpreting the whole situation and sensing that something is missing that causes the midwives to suspect that there may be a difficulty but it is also the 'blend' or amalgam of signs that gives a sense of certainty, that all is progressing well (page 57 mixture of 'physical signs').

'Well supposed if the picture isn't all fitting together, there's like missing pieces of the puzzle which is, I don't know she's been contracting really well have quite a long time but you'd expect her to maybe be getting their fully and she's not or if the contractions have really died off and you're wondering what is happening.' (Mary)

This comment makes a very important point; there are no certainties even with in the scientific community, which would pride itself as being the authoritative knowledge (Davis-Floyd 1997).

'I think there are lots of processes, energy, things that we don't understand that takes place and they are not scientific. Well maybe they are not the science that we understand and maybe, you know, my son's into all this stuff about quantum physics and energy and things that I don't understand but it seems to be that neither do a lot of scientists. There are things that they are proving that they cannot understand and they cannot explain and I'm sure about childbirth is part of that process and the way people are, it doesn't always make sense and you can't always put into little boxes and that's a real problem and somebody turns around and says you after it and says why did you do that.' (Maggie)

There is no research that has actually defined the duration of individual labour; standards and time limits used in hospital are based on averages (Friedman 1971). The limits that have been set have been chosen randomly, 18 hours for a first time labour and 12 hours for subsequent births (Tew 1995), in some cases these have been reduced even further

(O'Driscoll 1975). The only guideline that exists is from statistics which that demonstrated labours that are very short or very long carry a higher risk of morbidity and mortality (Tew 1995). Although there is some sort of guideline for the length of labour, it is not clear under what conditions the risk factor is increased; it may be that the style of care and the experience the midwives have would alert them to labours that are not progressing. Nevertheless, this puts the midwives in a situation of being criticised for their clinical decisions.

'Obviously, often when you go in, if you do have to transfer in, you get very raised eyebrows, but then you know there have been other labours lasting on that long that the woman has done it.' (Maggie)

It would appear that independent midwives are comfortable to work within an environment of uncertainty, as Martha commented earlier. The institutional setting focuses more on risk (Porter 1999). It seems that midwifery is controlled by rules of what they ought and should do rather than by judging each situation on individual needs (Stapleton 1997).

'It's a bit like life and death isn't it, people will die whether I like it or not, people will have sections whether I like it or not, people will have tears whether I like it or not, babies will come out needing a bit of help whether I like it or not.' (Martha)

Kirkham (2000) echoes that sense of being comfortable with uncertainty, she sees the guidelines of the medical model and the standards of quality management engender a more ritualistic behaviour within the institutional setting where childbirth is controlled in order to overcome uncertainty.

Philosophy

The midwife is kept steady in her uncertainty by her philosophy and beliefs that labour is normal.

'And so I still have a really, rock bottom, strong, sure instinct that birth as the process is normal, safe, life event. So I suppose that's where I'm coming from, that's my starting

point and so what I do it is I let my subconscious go and then in a way I trust it to let me know if there is something other than that. So that's my, that's my patent, my model.'

(Margie)

'Normal labour for me is a labour that starts and a woman progresses at whatever rate, I'm not really bothered so long as she is progressing, and that the end of it she gives birth to live baby, I suppose that the progression is in line with kind of what's happening, with uterine activity really, so you know she's contracting one in five although through, I don't expect to have a 12 hour labour.'

(Mary)

'I would link it with what I feel is as a midwife and very much an instinctual midwife, I would linking it with women's knowledge that goes back through the centuries. I would link it with the sort of knowledge that some would be burnt at the stake for, because midwives were counted as having that knowledge and I think it is because we can link with women in a very different way, it's a skill we develop, but I think it's a skill that we have to have some seed of it within yourself.'

(Meredith)

'Think I am a bit like Pooh, I just is. So may be, birth just is.....if only we'd let it. I rather like the idea of creating a safe space for the woman and chosen companions to BE, and then quietly applauding or congratulating when the babe slides out. By being there, by smiling my acceptance of whatever is happening, by sharing the "God I know it hurts but it will not go on for ever" I am saying yes all is well. By saying "we can go in, we can try what the hospital has to offer" I am encouraging the woman to do what is best for her. I think these responses are most useful to the woman and family if they have had the chance to get to know and trust me.'

(Mattie)

The midwives have a strong belief that labour is normal and that it will progress at its own rate and the woman will give birth to a live baby. The duration is considered in the context of what is happening with contractions in the labour. Midwives are partaking in a life event, which involves an ancient craft that women have, on occasions, had to risk their lives to protect. The midwife creates the safe environment where the woman's confidence is reinforced so she can succeed at what is birth for her. The greatest skill the midwife has is just to BE.

Experience

Experience has already been included under the section of 'knowing' (see page 79). It has been identified as one of the treads travelling along side the 'woman in labour' as well, because the midwives relate how they use their experience as a reference point for how the labour is progressing at any one moment. Their experience helps them to interpret 'knowing' and 'physical signs' of labour. The following quotes reinforce that concept.

'From experience, from experience, from having been at lots of labour, right, and having lots of women in labour, right, yeah so you're drawing on your experience from, from previous labours.' (Mary)

'I think it's a physical thing, I think it is the response to previous knowledge of others in similar situations and your knowledge of the woman not in labour and seeing how she is in labour.' (Mattie)

Value of style of Care

This again has come into the other themes, which reinforces that sense of interconnectivity of the model. Much of the ability to interpret labour is based on the value of the style of care independent midwives give. Knowing the woman antenatally and developing a relationship gives the midwife a baseline to assess the 'woman in labour'. This comparison against what the woman is like antenatally is carried through the labour. It also provides the tools to assess what the woman's real choices for labour are.

'It's really crucial that you know someone and by the time I get to labour I've got a fair idea of the sort of things that might be hanging around for the person, the sort of things I might have to have courage over, I might think I'm going to have to make sure that I don't get too soft in that area because that's not going to help someone get through the labour, things like that. So it's important and you've got the sense of what somebody can take so if someone's saying to you, "I want an epidural", you've got a better sense of whether they just saying it because it's a way of expressing how painful the labour is.' (Martha)

'So the continuity works both ways because the woman knows the midwife, she's more relaxed, she knows what is expected of her, because the midwife knows the woman she knows how the woman reacts to various stimuli and therefore can judge the

woman's reactions in labour or going into labour, and help her appropriately because she knows what works, what helps.' (Mattie)

Communication and Trust

This final code is a vital element involved with the 'woman in labour', this has strong connections with partnership in knowledge (page 89). It can be interpreted as the glue that holds all the threads together during labour. Communication and trust is built up during the course of the pregnancy as a result of the style of care. It is developed through having knowledge of the woman and partnership in knowledge. There is opportunity for the midwife and couple to get to know each other and talk about hopes, expectations and fears for labour.

'So that was very interesting for me um, how she dealt with that and how, just by visiting her and talking to her, its sort of got her through the labour completely.' (Maggie)

'I think because of the way we work we really know who we're working with, I mean that makes a big difference as well so that makes things a lot easier and I think you have a lot much more kind open communication.' (Mary)

'I think there's something about the relationship that's really important and I think that's kind of less tangible to describe really but it is about trust, it's largely about trust and it's about being responsive and it's about being honest.' (Martha)

The midwives can trust the woman and the woman's body because of their philosophy of normal birth and 'communication and trust' provides an environment where the midwife and woman feel they are working as one through the labour.

'Cos you are listening to the woman's body, and the woman's listening to her body and you are, your responding to it, you can trust it to work the way it supposed to work.' (Mattie)

'That was just absolutely an incredible experience for the woman and myself. We were completely working as one.' (Meredith)

Summary

This theme encompasses the 'woman in labour'. There are threads that are laid alongside the woman as she experiences and goes through the process of labour. The threads are an integral part of the labour; they give strength to the labour by being pulled together by mutual communication and trust. This provides an environment where the normal progress of labour can take place. The midwife's presence at the labour is intimately associated with the 'woman in labour'; she is there to be with the woman, rather than to do things to her.

Nicky Leap who practiced as an independent midwife in the London area during the 80's and early 90's sums up the sense of being with a 'woman in labour'.

'Our expertise as midwives rests in our ability to watch, to listen and to respond to any given situation with all of our senses. This will include the conscious and subconscious 'knowing' that has been generated from our experience and learning. It also involves a 'cluefulness' as we respond to overt and covert clues from women and their worlds. The skill lies in knowing when to inform, suggest, act, seek help and most importantly, be still or withdraw and remove ourselves. Our belief in a woman's inherent ability to be her own and her baby's expert should underpin all of these responses.'

(Nicky Leap 2000:5-6)

Here she supports many of the themes raised by the other midwives. Namely the use of all her senses, conscious and subconscious knowing associated with experience to interpret clues or signs correctly. She also shares the belief that women have that knowledge within them to know about their bodies, their baby and birth. Figure 7 below is a model that represents the threads alongside the 'woman in labour'.

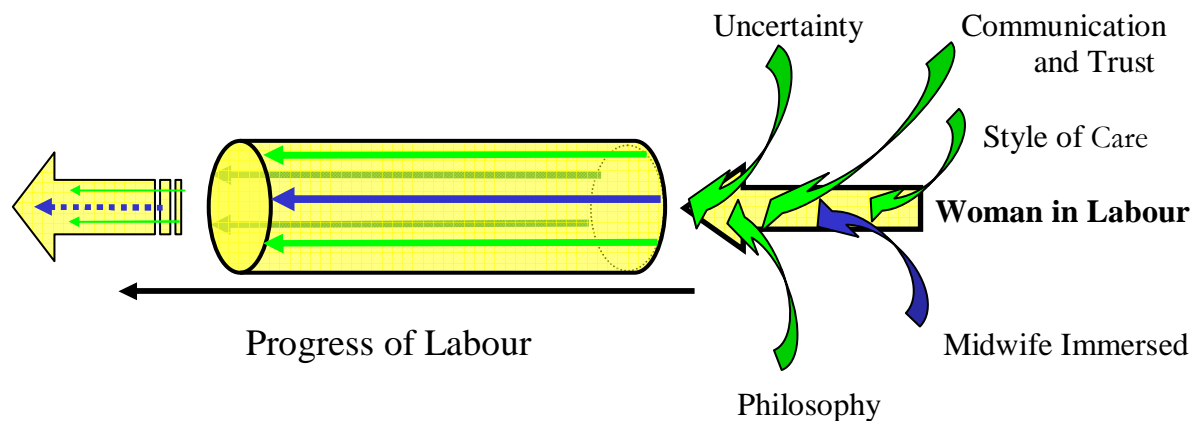


Figure 7. Woman in Labour

Interaction of Factors

This minor theme was developed to demonstrate the manner in which the independent midwives used the 'physical signs' and the ways of 'knowing' to assess the progress of labour. The midwives do not rely solely on one way of assessing the progress of labour but rather the interaction of a number of skills and ways of 'knowing'. It was also possible to suggest a way that that relates to the theme of the 'woman in labour'.

The midwives were able to share a number of methods for assessing the progress of labour, which was confirmed in some measure by the results of Table 2 (page 77). These became obvious when they responded to the initial prompt of how they assessed the progress of labour. They used a number of skills, observations and senses to build up a picture of what was happening. The 'picture' of what is happening is integrated together, a 'mishmash' web of fibres, 'puzzle' pieces fitting together and if they are missing then there is an alert.

'Well I suppose I use lots of different methods, none of which are, some of which are conscious I suppose and some are not, some are more on the subconscious level.'
(Margie)

'So it's always kind of looking at the whole picture I suppose rather than just looking at dilatation.' (Mary)

'So it's, it's a bit of a mishmash really isn't it, this is always the trouble when you try and explain to people who work in hospital and they think you are peculiar, or they think you are a bad practitioner.' (Maggie)

'I think essentially it would be, its multi-sensory I think that's the sort of, like nutshell of it and I think that's what I have in my mind.' (Martha)

'Its, its not easy, and I think you have to be honest and say you can get it wrong, however you set out to do it. Its mostly by an overall view of what happens when you arrive at somebody's house.' (Mattie)

'An amalgamation of watching the woman's behaviour, how she's talking, the sound she's making, it's an amalgamation if you like of, that's where your are picking the sense up.' (Meredith)

These extracts demonstrate that the midwives use a number of different methods to assess labour; they are both conscious and subconscious. An amalgam of different ways of 'knowing' and 'physical signs' is used to make a decision about the progress in labour.

'There's a thing about being still and giving your time to listen to the labour.' (Martha)

'Observations skills I suppose and also even over the telephone...' (Meredith)

'I'll do a lot of watching an observation and, and assessing from what they are saying.' (Margie)

Under the section on sense (page 96), the suggestion of a blend of smells from cooking was applied to smelling or interpreting the progress of labour, this is further supported by the quote that uses the metaphor of an amalgam. The idea that emerges is when the midwives arrive at the labour, they immerse themselves alongside the 'woman in labour' and using a blend or 'mishmash' of different signs, and they are able to interpret the progress of labour. The interpretation of the different signs appears to be dynamic, changing from moment to moment depending on the 'blend' of signs being picked up or 'smelt'. The interpretation will also vary depending on the knowledge of the woman because the midwife will have a

different history with each person she looks after since the style of care she provides caters to each woman's individual need. As the labour progresses, there is a continual assessing and referring back to see how the labour has progressed and a looking forward with an expectation of normality.

A model (Figure 8 below) to illustrate this interaction of factors has been superimposed on Figure 7 (page 127) to demonstrate this interaction. 'Knowing' and 'physical signs' are represented as two coils or balls of string, the various strands are the different 'physical signs' or types of knowledge the midwife has at her disposal during the labour. They come with the midwife, for example 'experience' or have been set in place during the antenatal period, for example 'knowledge of the woman'. These assessing skills unwind from the coils as labour progresses and coil round the 'woman in labour' in a mishmash or web. They interact with each other as the progress of the labour continues. Proactive knowledge is introduced into the process periodically; the red flecks within the interaction of factors represent it. See Figure 8 below.

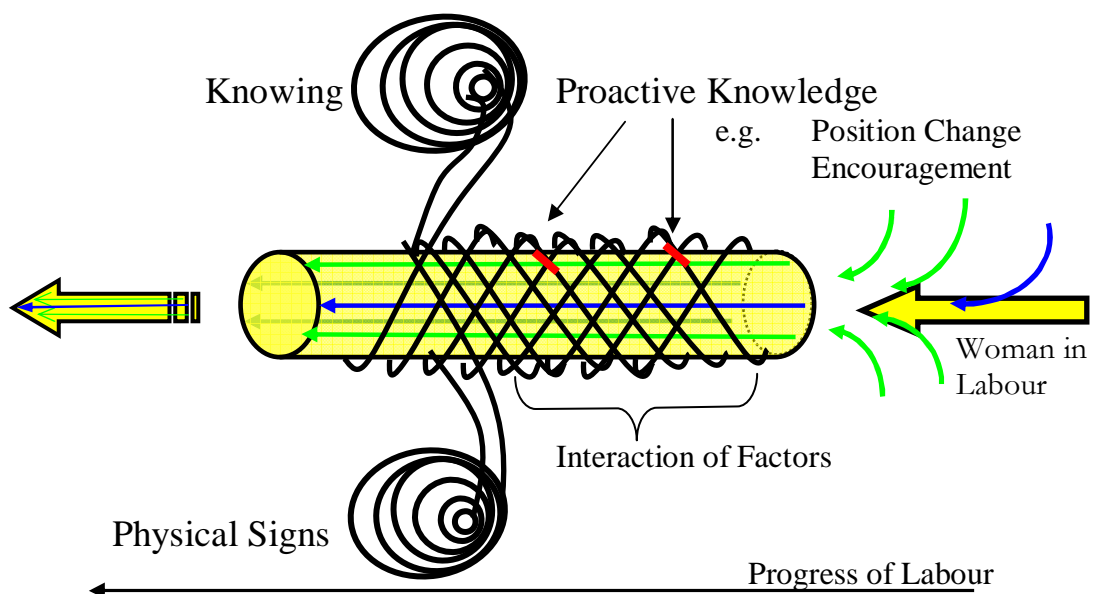


Figure 8. Interaction of Factors

Many of the features identified within the themes of the ‘woman in labour’ and ‘interaction of factors’ have similar elements to those found within the principles of chaos, uncertainty and fractals, which is more commonly known as Chaos Theory or the Theory of Complex Systems (Brennan 1997). In the 1960s Edward Lorenz described what is now known as the butterfly effect, how a butterfly in the Amazon forest could affect tornado patterns across the other side of the world (Lorenz 1963). Therefore the smallest alteration at the onset of phenomena can have a substantial repercussion on the outcome. The original intention of Lorenz’s work was to provide a model for weather patterns but it has also been looked at as a way of understanding fluid flow, biological systems and human behaviour (Lorenz 1963). This approach moves away from Cartesian precepts of cause and effect that breaks down wholes to examine how the individual parts work. Instead Chaos Theory looks at the structure as a whole (Capra 1996, Merry 1995). For example, if a forest is to be studied, it is not useful to study just a tree; it has to be examined in the context of the whole (Brennan 1997). Similarly, if labour is broken down into discrete parts, the whole interconnectedness of the process is lost. This loss of interconnection can be seen from the work of Friedman (1954), Philpott & Castle (1972) and Studd (1973) where the cervix becomes the focus of research and the women actually experiencing labour is detached from the progress of her cervical dilatation.

From what the midwives have expressed in this study, it is not possible to separate the various themes, as they appear to be interdependent. For example, none of the midwives listen to the sounds the women make as an isolated entity. Assessing the progress of labour is intimately bound up with knowing the woman, the level of the midwife’s experience, uncertainty and a number of other factors. The whole is more than the sum of its parts so in order to understand the whole it is necessary to understand the interconnectedness of all

the parts. Brodnick (1997) points out that despite knowing all the interconnections, uncertainty remains because it is not always possible to understand how the interconnections make up the whole. The respondents have identified that much uncertainty surrounds labour, particularly around when labour actually starts (Friedman 1954, Philpott & Castle 1972, Studd 1973). Once labour is in process, it is not possible to predict the path it will take or its outcome, the only certainty is that at some point the process will end.

In addition to the problem of how to know that labour has started, it is equally difficult to measure exactly when it has started, because it is impossible to gain an accurate, objective reading of this event (Cluett 2000). Within Chaotic Systems, slight changes in initial conditions make vast differences in the subsequent behaviour (Kaufman 1993), inaccuracies in measuring the starting conditions of a system lead to large divergences between expected and actual result (Lang 1999). So if the beginning of labour cannot be known or accurately measured (Friedman 1954, Philpott & Castle 1972, Studd 1973, Cluett 2002a) and it is not possible to predict the path that the progress of labour will take, then for each woman and the midwife involved in their care, there is a unique moment that cannot be repeated. Even if the woman were to take on the midwife for subsequent births, the progress would be different since the midwife had grown in experience and the woman and her emotional situation would be different. It is likely there would be slight changes in the style of care and the philosophies of the people involved in the process.

An important aspect of chaotic systems are attractors, these could be likened to magnets that provide pull and give the system flow and direction or perhaps likened to water flowing through a pipe, the flow will never be the same but it will go forward (Brennan 1997). The attractors give boundaries to a process, giving it stability and yet the pattern of

flow is never the same (Petree 2002). From what the midwives have shared, labour has to progress and has an end, however that limit is vague. Each labour is judged on guidelines that the midwife and the woman set depending on who it is they are caring for and what the woman's choices are but there is a finality to the whole event. The Midwife's Rules require that midwives act appropriately (UKCC 1998). Decision-making has the unmistakable imprint of chaos on it (Petree 2002). There are always so many assumptions and implications to consider that it is sometimes quite overwhelming. Here attractors aid in the decision-making process and may also take the form of an individual's philosophy or belief system (Merry 1995). From what the respondents have said, the guidelines and rules they set for themselves during each labour as well as their relationship with the woman and each of their philosophies on life all provide a boundary that can direct the assessment of the progress of labour.

Chaos theory may give the impression of being random (Lang 1999) but it is thought that Chaotic Systems actually produce ordered structures and patterns (Trump 1998). These patterns are referred to as fractals and they are found at smaller and smaller scales throughout the wholeness of the system (Brennan 1997). They are repetitive and consistent within the system, in effect; the shape of the whole is reflected at all level so that wholes within a whole can be observed (Capra 1996). Benoit Mandelbrot was largely responsible for the present interest in fractals; he showed how fractals could occur in many different places in both mathematics and elsewhere in nature (Donahue 1997). A fractal shape will look almost, or even exactly, the same no matter what size it is viewed at as demonstrated by Figure 9 below, a fractal known as the Sierpinski Triangle (Donahue 1997).

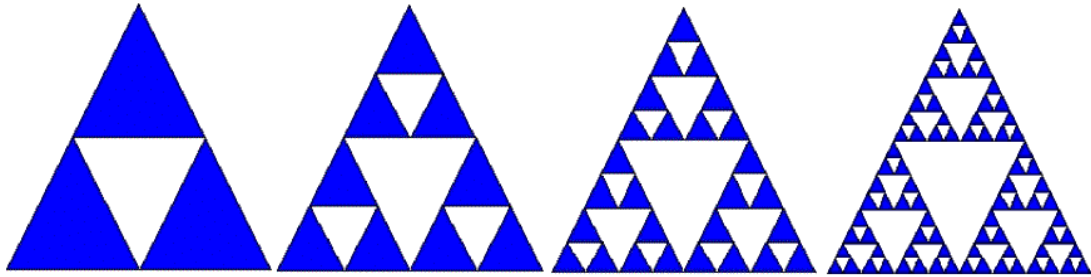
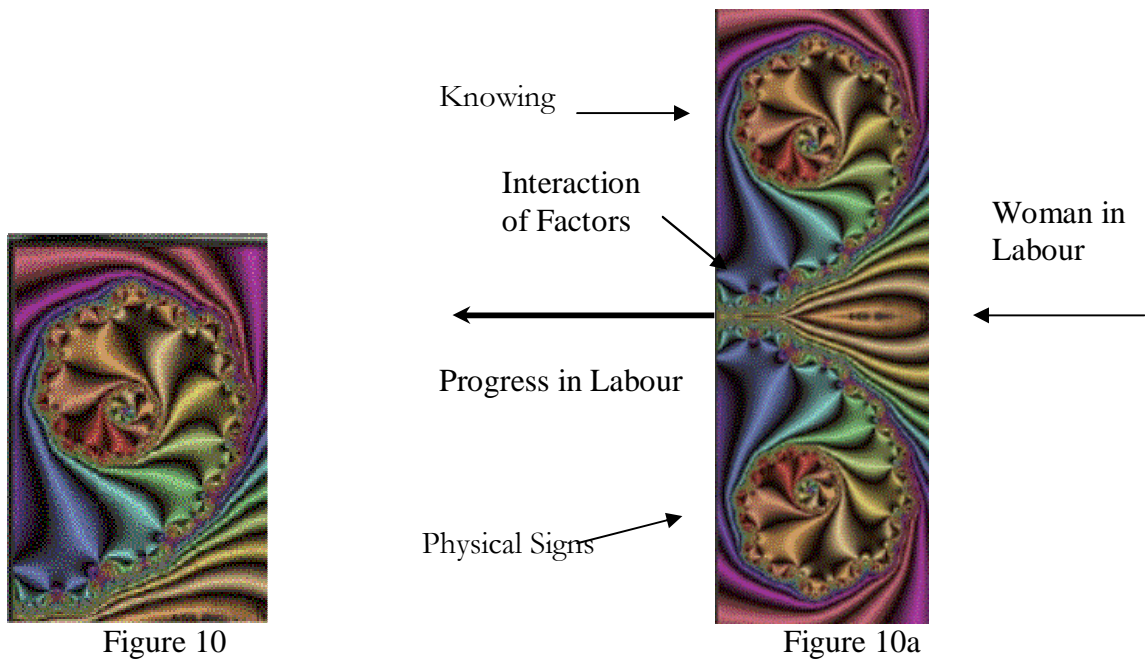


Figure 9

Taken from Donahue (1997)

The principle of fractals can be applied to the midwives assessing the progress of labour. Assessing the progress of labour could be represented by the large triangle. Each sign or ‘knowing’ that the midwives have identified could relate to a smaller triangle and perhaps the more useful ones could be represented by a slightly larger division. In order for the midwives to interpret the ‘physical signs’ or ‘knowing’, it has to be seen in the context of uncertainty, trust and relationship with the woman, the style of care, the midwife being immersed in the labour, the philosophy of the woman and the midwife and the ‘woman in labour’; which would provide the boundary or attractor for the system. This is demonstrated in Figure 8.

Chaos systems occurring in nature including human and behavioural systems have been identified as far more complex than the triangles above (Petree 20002); perhaps a better representation could be Figure 10 and 10a below. Figure 10 has been adapted using a graphics computer package to express some of the properties of a fractal. Within Figure 10 it is possible to see the reoccurring pattern as it becomes smaller. Putting two together as in Figure 10a, a sense of flow is achieved, which in some way resembles Figure 8 with the sense of interconnectedness and flow of the progress of labour.



Fractal Figure 10 taken from Petree (2002) and adapted for Figure 10a

This is perhaps where the work of Friedman (1954) and colleagues miss out the complex process as they only considered one aspect of the progress of labour. If both the woman and the midwife's contribution to assessing the progress of labour, as well as personal philosophy and experience are included this would have important consequences for the use of randomised controlled trials. Jowitt (2001) asks the question of how it is possible to measure the art of enabling, empowering and being with women? As Petree (2002) comments, it would seem that the presence of chaotic systems in nature places a limit on the ability to apply predictive deterministic physical laws.

Disruption of Labour and the Disruption of the Knowledge of Labour

The final theme to emerge from the data is made up from codes that are connected with how the process of assessing labour is disrupted (see Figure 5). This takes place at two levels; the first is the disruption of the relationship between the midwife, the woman and her family.

'The other thing that could interfere with your concentration or your receptiveness to the situation is a conflict between either woman and her partner or her doula (for definition of a Doula see footnote ¹).' (Mattie)

If the midwife does not have an opportunity to get to know the woman antenatally, she is unable to develop a relationship of trust where emotional issues can be dealt with (see page 125). Margie identifies some of the situations that require acknowledgement in the antenatal period.

'And it may be that you know there's something going on in her head, maybe its fear. Maybe if it's if her first baby, it about becoming a mother, is there an anxiety? So on those sorts of levels if it's somebody we've known well through the antenatal period, they are areas that I will very specifically bring up.' (Margie)

The midwives relate the consequences of the woman not being prepared to come to terms with these issues even if they know the woman and attempts to draw the issues out.

'I think it's terribly important to enable a woman to have a good birth experience whatever that experience end up as, we must work with them antenatally because you are building a knowledge aren't you, again, you are building a knowledge of that woman, of how she ticks and if she doesn't let you in, somebody I'm working with the moment she's had two Caesarean sections and she'll have the third one, I know she will, because she is not willing to work at anything.' (Meredith)

If the midwife is unfamiliar with the woman, she tends to resort to using a more medical model. Caring for a woman using the medical model will lead to interventions that result in the disruption of the progress of normal labour (O'Driscoll 1975, Jordan 1997,1993).

'I know when I don't know someone very well, if I'm just doing the labour which I rarely do, I have to use the medical model more because I've got less to go on and in some respects I feel slightly more defensive in my patterns because I'm less sure of the ground between myself and the woman and the couple and so on.' (Martha)

¹ Generally a non medical person experienced in birth who will stay with the woman and her partner throughout the labour. They will give information and provide emotional and physical support (Walters and Kirkham 1997).

The midwives feel that if women have read too much about labour and treat it more as an academic exercise, rather than allowing themselves to be abandoned to the process, they are at risk of trying to pre-empt the progress of labour. Other women will try to fulfil the expectations of the midwife, providing information the woman thinks the midwife wants to hear. The midwife's knowledge of assessing will be disrupted in labour and she will resort to a more formal way to assess progress.

'The woman who's too cerebral, who is in her head and has not gone into things will tell you what she thinks you want to hear quite often, she has read all the right books and she'll be saying "I'm feeling lots of low pressure now" and you think, that's, that's not how people say it, that sounds like a bit you've read in the books, it doesn't sound like what is actually happening. VEs can be very useful, I think they are useful when you have a conflict between the information you are receiving.' (Mattie)

'I think sometimes they can get into a situation when they start telling you what they think you want them to say, though I think sometimes women get into a situation where they start thinking, if they start telling you that they're feeling pressure and all these kind of things, that it means that they will be and that they will get on, they convince you that they are really progressing. If there is a lot of ambiguity, than I'll suggest maybe doing an examination, if that's what she wants.' (Mary)

Yet if unnecessary VEs are performed, they are perceived as intrusive and the procedures will disrupt the progress of labour. Other procedures such as moving the woman in labour (Leng et al 1988) were seen to disrupt labour.

'To get a good partogram reading you need regular VEs and I think they are intrusive and they may stop people labouring.' (Mattie)

The midwives spoke of occasions when their knowledge of labour, intuition in particular, was disrupted by their own emotional state. They need to feel steady within themselves to see clearly during labour, if that is clouded in some way, they use the medical model as a fallback.

'I think there are times when you just feel much more centred within yourself and you can, you've got much clearer vision about what's going on then there are other times when you're confused about it and you have to use the medical model stuff because it gives you the clarity that your intuition isn't giving you on that occasion...It's interesting

thinking of clear vision because it is about water, and it's like, if you ruffle the water, particularly if it's got sand in it. I've just been to Africa so that's a kind of image for me, so you go ruffle it and there's lots of sand in it and you don't, actually its crystal clear and you can see to the bottom, but you can't see a damn thing because the sand is all ruffled and you have to wait for the sand to settle before you can really see and there are times when I can't do that, for a number of reasons some of which are known to me, and some of which are not.' (Martha)

Some of the midwives suggested that the environment they practice in affect labours progressing normally. They imply that a disruption in their ability to relate to the woman has an affect on an energy or spiritual level, which will in tern affect the outcome of the births they go to. Restoring harmony between them will result in better labour outcomes.

'Your framework of beliefs about childbirth and women, life! And energy and all those things that can't really be explained I mean, we've found, we've found a very interesting thing that when, when things are not comfortable in our practice, we get lots of difficult births (laughing). And when things are comfortable in the practice and we're all working well together, we get more normal, straightforward births.' (Maggie)

At the second level of disruption, the midwives' and the women's knowledge of labour are disrupted. This happens through the criticism of clinical decisions that have been made, the environment in which the midwife and the woman find themselves and issues of conflict that may be related to clinical decision-making.

In the section on 'knowledge of the woman' and 'intuition and instinct', the midwives identified how fear disrupts that process. It is often the need to transfer into the hospital environment that initially provokes that fear; this will in turn disrupt the midwives ability to assess the progress of labour. Midwives identify a loss of confidence in their ability to know and have to conform to the medical model to communicate rather than a reciprocal understanding of each other's position.

'I think sometimes if I do hesitate then I lose, then I lose the confidence to say and that's what worries me about transferring into hospital, because I really come back up into the; I have had to talk to doctors now. That worries me, that I become very cerebral, what's the word, that it all goes into my head because I am very conscious that when you of

communicating with doctors, you are talking medical language, you know, you lose that, those other. And also that they would be given no credence, it would be very difficult go in and say to senior registrar, you know, my subconscious, my instinct, you know, they would just laugh you about the room, they are not interested in, most of them, must be too blatant sort of. And because they don't operate in that, in those spheres.' (Margie)

Independent midwife Helen Shallow highlighted in her study how midwives within the NHS are made to follow hospital policies and although some struggled to maintain midwifery values; they feel devalued and disempowered (Shallow 2001a, 2001b). The independent midwives relate that they experience similar pressures when they transfer their woman to hospital. They perceive that they are criticised for the clinical decisions they have made. The criticism may be as little as a raised eyebrow or as concrete as a direct challenge of the way the midwives practice.

'And obviously, often when you go in, if you do have to transfer in, you get very raised eyebrows, but then you know there have been other labours that have gone on that long that the woman has done it.' (Maggie)

'I had a very bad experience and have had to justify what I do, I do find myself writing all sorts of peculiar things in my notes that I wouldn't normally have written.' (Maggie)

'And if I'm going to be transferring, am I able to justify what I'm doing here because I think for an independent midwife, as sad as it is, I think you have to anticipate challenges to your way of working, you have to anticipate that people are going to be quite aggressive sometimes about your decision-making. So I suppose I'm thinking, "okay, is this going to be acceptable". Even though the other part of me will feel quite comfortable with the fact that it is acceptable in my mind and I'm not consciously worried about it.' (Margie)

This anticipation of challenge and criticism creates anxiety in the midwife; she can be rejected merely because she is an independent midwife.

'The classic conflict would be, you go into hospital, you have to transfer somebody in and I'm always anxious, that somebody is going to think that the way that I've done it is crap and its loads of things, it's starts really early on, like, well first of all, they will either love or hate the fact that you are an independent midwife regardless of who you are.' (Martha)

Even though Mary's decision below was based on recent research (Albers 1999), she was criticised for her decision to keep the woman at home.

'They're going on about how long I kept her at home, I was completely gob-smacked when they said that because I didn't think for one for instance that I kept her at home for the long, for one minute, it was like an illustration of how far apart we are, you know, you think that's prolonged labour, I was only there for seven hours, and she was progressing all the time and the minute she, stopped progressing I took her in but they're saying I kept her at home for too long which is completely, you know makes me think ooh, you should see some of my other cases, if you think this one is long.' (Mary)

There had not been any indication to transfer until the moment that she actually chose to transfer. It is this lack of respect of the midwives' clinical decisions in their practice that led to them leaving the institutional environment. Meredith's comment particularly supports what Shallow (2001b) has explored.

'You know, there wasn't the kind of equal dialogue between the two professions. It's about, OK that's quite interesting I wouldn't do it like that or anything like that it's just kind of 'your doing it wrong' and I just found that too stressful.' (Martha)

'But that is basically how I came to be an independent midwife, it was purely and simply because management were not enabling us to practice as midwives should and to use all our skills. So I was forced, yeah, so really must say thank you very much to her.' (Meredith)

Kirkham (1997) also comments on the dominance of the medical, technocratic view and how customs and power structures have pushed midwives thinking towards the more medical model. Taylor (2000) laments that midwives are not regarded as equal partners with different knowledge and skills base but as nurses, to meet defined a protocol.

The midwives relate to having a sense of anxiety about what is expected of them when they transfer in and attempt to avoid criticism by following the hospitals guidelines. In striving to achieve this, the interviewees feel the woman's care is sacrificed for routine and protocol. Edwards' (2000) study echoes this sentiment. Her study identified how midwives within the NHS find themselves in a hierarchical structure where they feel unable to assert

themselves for fear of reprisal and the women experience the inability to express their need for fear of antagonising the relationship they have with the professional because of their vulnerable position (Edwards 2000). If the focus of care is taken away from the woman, knowledge of woman and the midwives' ability to use intuition is disrupted. This would affect the midwife's ability to assess the progress of labour using the model suggested in Figure 8. It would suggest that a more medical model would be resorted to while in the hospital environment.

'So if you transfer into hospital and people are watching what you're doing, you think "oh shit should I be listening in more often, what's their policy like" and you're trying to give good care to that particular woman but you are aware that other people may be looking at you and watching what you're doing. But if you are in a hospital situation, you are aware that other people feel you should be doing something and that probably makes you less able to focus on the woman so it probably other people's expectations of you.' (Mattie)

'It's difficult, I find it extremely difficult, there is a conflict there, there is a conflict between trying to be a person who responds to the woman and supports her and enables her and believes in normality and being a midwife who can justify everything that she's done.' (Maggie)

The midwives feel that when they choose to follow their own judgement rather than acquiesce to the institutional demands, it can set up a tension or conflict within them that they need to see past. If they do not get past the conflict, they feel that their judgement is impaired in some way.

'It really difficult because the last thing you want is for it to affect your judgment in a way that will impede on the woman or on your own practice. So I think it can't help but make you do things sooner perhaps then you would. And whether it's that awful thing of who are you doing it for, is it to protect your own position as an independent midwife, is it to protect the mother and baby, I mean its, if I'm conscious of that a possibility, then I will try and see through the twitchiness and say, "okay am I really twitchy here, or is this really to do with knowing, thinking that I might have to go in?"' (Margie)

'You know obstetrics would do, and its terribly difficult being a midwife because there is so little knowledge of midwifery knowledge, there is so little acceptance that there is a midwifery knowledge'. (Meredith)

Meredith gives a good example of how authoritative knowledge (Jordan 1997, page 93) can disrupt a midwife's ability to deal with a situation; she is an experienced midwife having practiced for 25 years. In this time she has developed reliable skills to deal with many emergency situations. As part of her continuing professional development requirements (UKCC 1998), she attended an Advanced Life Support in Obstetrics course (ALSO) to improve her skills. Rather than an environment of shared learning, emergency procedures are taught in a ritualistic or drill fashion.

In order to demonstrate that learning outcomes have been achieved, the students are given a scenario to deal with. Meredith's scenario was the care of a woman with a shoulder dystocia (shoulder trapped above the symphysis pubis at birth after the head is born). Her immediate response was the midwifery manoeuvre which she has used successfully for years and takes into account the fact that the woman she looks after give birth on all fours or upright. While the ALSO (2000) course teaches the McRoberts manoeuvre expecting the woman to be lying on her back. She failed her scenario, not because she was not successful in dealing with the situation but because she did not follow the mnemonic they were instructed to use.

'And this was actually the scenario that was given to me at the ASLO course in my mega, mega delivery bit, which I failed first time because I used the midwifery manoeuvre.' (Meredith)

Her instinct was to resort to her skills which have worked in the past, she explained after the interview that she was dyslexic, so the type of knowledge offered her was not useful to her; neither was the training flexible enough to accommodate other knowledge. Following the course she attended another birth, she suspected the birth would result in a shoulder dystocia. The situation caused her to experience conflict over her own midwifery knowledge since it had not been accepted by the ALSO course and yet she was insecure in

the new knowledge because it was unfamiliar. As a result she performed a small episiotomy and questioned her own judgement, not knowing whether it had been necessary or because of the unsettling affect of the course she had attended.

'I just recently did the ALSO course, and I just, then had a birth this weekend and interestingly enough, I don't know whether I took the wrong energy or whether I was being challenged having been very pompous about midwifery skills and not getting right into that sort of situation, but I was at this first birth, a woman was getting extremely tired in the second stage.....she then went on and started to push and the FH (fetal heart) dropped and was actually taking quite a while to pick up and knowing we were probably 20 minutes away from hospital, I was thinking should we transfer and this was actually the scenario that was given to me at the course in my mega, mega delivery bit, which I failed first time because I used the midwifery manoeuvre, so I used the so I used the midwifery manoeuvre, and guess what the FH came up beautifully...I did have to use my episiotomy scissors for the third time and one of those times I lent them to somebody else. So that was literally just a snip through a piece of skin that would not relax and go, and so I was, I was really, I don't know whether I was wound up because of the ALSO course, and had I not been on the ALSO course, I wouldn't have snipped, I don't know.But I found that quite challenging, but also quite satisfying, in as much as midwifery skills did work thank you very much.' (Meredith)

Summary

The independent midwives have experienced the institutional environment as a place where the clinical decisions they make are criticised, even if they have research on their side. Should they need to transfer the woman in their care to hospital, the fear of that criticism causes some degree of anxiety. This anxiety or fear can disrupt the midwife's ability to give the style of care she would normally give to the woman. They do not believe that their opinions are valued within the hospital setting and as a result of this their use of 'physical signs' and 'knowing' is disrupted. There seems to be a conflict between how the midwives would like to practice and the way they perceive they are expected to practice within the hospital environment. The conflicting demands on midwives and the pressures they experience within the institutional setting are the very reasons they left to become independent midwives.

The final theme of 'disruption of labour' has been added to Figure 8 in the form of a lightening bolt to demonstrate where labour can be disrupted (see Figure 11 below). 'Knowing' and the 'physical signs' are disrupted by the breakdown of the relationship between the woman, the midwife or the woman's partner. If the woman is trying to fulfil the expectations of the midwife by pre-empting what she should be feeling, the midwife cannot judge the progress of labour well. Transferring into the hospital setting disrupts the midwife's knowledge, here she feels her contribution is not as valid and her physical skills are seen as subordinate to labour ward protocols.

Authoritative knowledge imposes itself on the midwifery knowledge, which can make the midwife lose confidence and challenges the use of her skills. The fact that the midwives have already decided to transfer the woman into hospital indicates that there is a problem with the progress of labour; so transferring into hospital appeared the appropriate action for the woman's situation. Transferring to hospital as such is not the problem, it is the way the midwives perceive they will be received that evokes anxieties and from their dialogue, it seems these fears are often realised. This in turn disrupts the way they assess the progress of labour.

Orme & Maggs (1993) found that conflicts and tension arose in decision making when the philosophy of the practitioner differed from policies or the perceived right way of doing something. It would seem that independent midwives often find themselves in this situation if they need to transfer to the hospital environment.

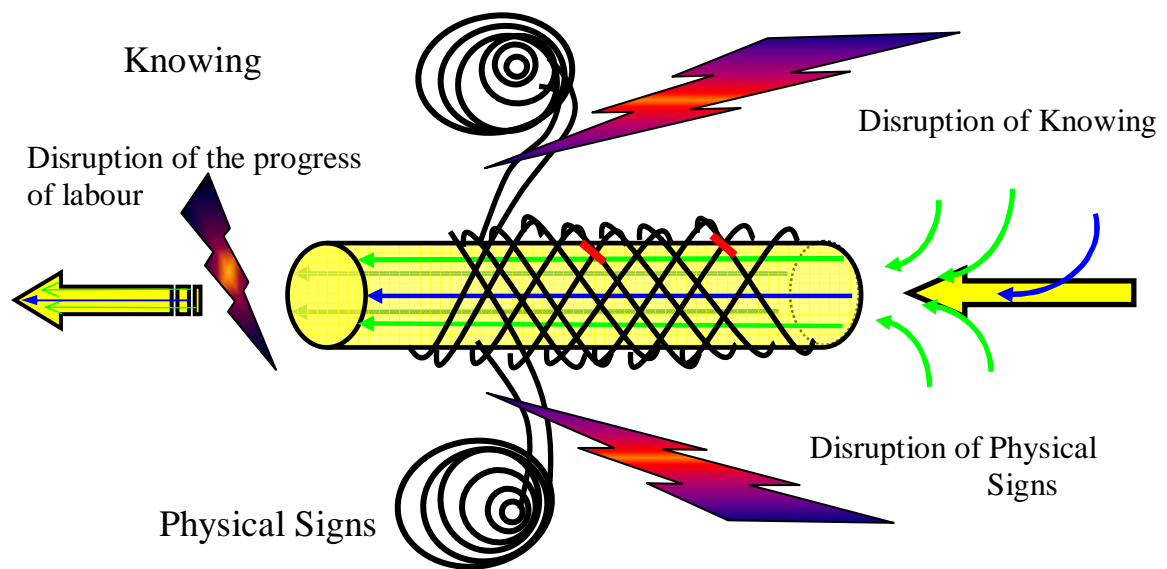


Figure 11. Disruption of Labour

Mary Newburn sums up the 'disruption of labour' with her comment:

'A normal physiological process is a series of natural functions of the body that proceeds effectively, directed internally and to some extent unconsciously, without complications. Physiological processes such as digestion, defecation or sexual intercourse can be disturbed by lack of privacy, and stress or anxiety. This also applies to the process of birth.' (Newburn 2002:126)

If the midwife and the woman are no longer able to use the fractals of uncertainty, trust and relationship with the woman, the style of care, the midwife being immersed in the labour, the philosophy of the woman and the midwife and the 'woman in labour'. Then the factors that define chaotic systems would be disrupted, the woman and the midwife are reduced to the more controlled environment and the traditional way of assessing labour through routine vaginal examinations. This in itself is not a problem; the medical model has used VEs for many years (Friedman 1954). It is however the use of midwifery skills and the value of the woman's contribution in her process through labour that is compromised.

Conclusion

This study aimed to explore how independent midwives assess the progress of labour. The literature revealed that little research has been done to investigate midwifery skills in assessing the progress of labour whether the midwife practises within the institutional setting or independently. Existing research on progress in labour is exclusively derived from a medical model using statistical evidence, which has set the standard for assessing progress of labour within institutional settings.

A Grounded Theory approach using 6 semi-structured interviews was used to collect and analyse data. From the data, a model emerged of how the midwives assess the progress of labour.

Three main themes and two minor themes were identified.

Physical Signs:

These signs can be seen or heard to change throughout labour.

Knowing:

The types of knowledge the midwives use to interpret the labour.

Woman in labour:

Characteristics that were intimately associated with the woman when she is in labour.

Interaction of factors:

A dynamic interplay was demonstrated between knowing and physical signs, as the midwives interpreted the progress of labour minute by minute. This process of assessing the progress of labour was likened to the concepts used in Chaotic Systems.

Disruption of the knowledge of the progress of labour:

This final theme identified situations where the midwives felt that their ability to assess the progress of labour was compromised. Often the delicate interplay between physical signs,

knowing and the relationship with the woman was reported to be disrupted once the midwives transferred into the institutional environment.

Assessing the progress of labour – a dynamic relationship:

The midwives related how they were able to assess the progress of labour without using vaginal examination as required in the institutional setting. The bases of the skills employed were listening to the woman in labour, not only to her sounds but also responding to her verbal comments. Watching, not just observing the woman in labour but the midwife being prepared to immersing herself along side the woman in labour. These skills were strengthened by the relationship the midwife and the woman developed during the antenatal period; an environment of communication and trust was developed in this setting. This study has shown that the degree of communication and trust between the midwife and the woman is the foundation of the midwives care. The woman's participation was regarded as essential, since interpreting correctly what the midwives sensed very much depended on the relationship that developed through the antenatal period.

This underpinning principle built on through the antenatal period, is reinforced in labour by the midwife's ability to immerse herself in labour alongside the woman. The midwife continues to assess the progress of labour by continually interpreting the physical signs in the context of her skills of knowing and her relationship with the woman. The ability for the midwife to interpret these interrelationships as labour progresses improves with experience and the degree to which the midwife can relate to the woman. Hence each birth is a unique for both the woman and the midwife yet the occasion takes place within the same general principles incorporated in the theme of the 'woman in labour'.

This study suggests that the progress of labour not only results in the physical birth of the baby but also encompasses an emotional and spiritual dimension, a journey taken by the woman and those who labour with her.

The implications of this study are:

- Independent midwives feel confident in the process of labour, letting labour progress at its own rate.
- Midwives use many skills to assess the progress of labour.
- Each labour is a unique experience.
- All those involved in labour have a part to play in its progress.
- Assessing the progress of labour is not just a matter of measuring dilatation of the cervix.
- Labour is a dynamic process that changes minute by minute. Therefore the skills required to assess progress need to be flexible and dynamic, taking into consideration the physical progress of labour in the context of the emotional and spiritual dimensions.

If Chaos Theory is an appropriate way to investigate interactional human behaviours over time, then the use of randomised controlled trials to study uncomplicated labour could be questioned. Chaos Theory takes into account the many factors that may change the outcome of the area being investigated. In the case of independent midwifery care, factors that need to be considered include issues such as the philosophy of the person caring for the woman, the philosophy of the woman herself; the relationship between woman and midwife, the midwife's experience and the style of care. In this study, all these factors were shown to have an affect on assessing the progress of labour. Chaos Theory in effect looks

at the unity of the process whereas randomised controlled trials isolate part of a process and assumes that randomisation will cancel out all the other variations.

While it is not possible to generalise this study to all midwives, it covers 18% of all independent midwives who were practicing full time during the period of September 2001 – March 2002. It is therefore possible to feel fairly confident that this has captured many of the features of midwifery care provided by independent midwives. The data from this study may be useful in providing a comparison of different styles of midwifery care.

Recommendations

This study offers a framework that can be tested across a variety of practice settings. Further study would engage midwives working within a number of different types of units such as birth centres as well as hospital units. This would provide a comparison with independent practice, or perhaps confirm that midwives use midwifery skills as well as more formal methods to assess progress of labour.

This study raises important practical and philosophical issues for debate within various areas of childbirth.

- Confidence in midwifery skills.
- History affecting the recognition of midwifery practice.
- The manner in which midwifery research is carried out.
- Support of midwives working outside when they interface with the institutional environment.

Further studies

Had there been more time to explore all the areas raised by the midwives in this study, the topic of intuition and of intuition and instinct could have been further investigated in the light of current literature. The model that was developed from the data provided by the interviewees could be used to examine intuition in other practice environments.

If randomised controlled trials are used to examine the effects of different midwifery practices, some of the elements of Chaos Theory could be employed. The study could be modified to take into account some of the attitudes and beliefs of the midwife providing the care since this was a feature of this particular study. This could be achieved by providing a grid to each midwife participant where they can outline their personal philosophy about midwifery, the perceived level of their skills, experience and their attitude towards the woman they are caring for. This could be examined in the context of the outcomes of the study as a whole.

The data from this study could be further explored through the framework of an ethical model or in the light of feminist literature. This would provide a different perspective on the way independent midwives practice

Limitations of the study

A single investigator has the potential for bias; this would be improved by working within a research team where the contribution of different team members and their joint agreement would increase the trustworthiness of the analysis. In the terms of this project, this was not possible.

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Appendices

Appendix I. IMA membership conditions

Indicate membership type:-	Membership fee:
Full Member (per person in the practice)	£50
Associate Member (not completed two cases as independent midwife, or midwife)	£25
Friend (for support and interest)	£5
For 5 years Friends membership	£20

Date application returned to membership secretary

Date application received by membership secretary

To have your entry in the next register, it must reach me before 31st of July.

- Before sending your form back **check:**
- **Make sure you have signed your application form at the bottom!!!!**
- If you want a receipt, send a S.A.E.
- Have you enclosed a cheque for the right amount
- Make cheques payable to the IMA

It would be very helpful if you would let me know if you are not joining the IMA this time.

Only tick TWO areas you would like your practice entered under.

East Anglia	North East	South West	Scotland
London	North West	Eire	Wales
Midlands	South East	Northern Ireland	

IMA defines an independent midwife, for the purpose of membership as a registered midwife who is self employed on either full or part time basis. She is an autonomous practitioner, acting as the woman's advocate in providing individualised midwifery care. Her clinical practice is governed by the UKCC's Midwives Rules, Midwife's Code of Practice and Code of Professional Conduct. She is able to choose her own clients, practice colleagues, working patterns and system of record keeping. She has no geographical boundaries within the UK.

If you would like to be a member of the IMA, please sign here to confirm that your practice complies with this definition.

I confirm that my practice as an Independent Midwife complies with the above definition.

Signed..... Date.....

Please return your forms to the membership secretary: Andrya Prescott
1 Deanery Place, Church Street, Godalming, Surrey, GU7 1ER Tel: 01483 425477

Ima Membership Application Form

Personal Details:

Name: _____ Surname: _____
Address: _____ Telephone: _____

Bleep: _____

Mobile: _____
Postcode: _____ Fax: _____ E mail: _____

Details for the Register:

Practice name: _____
Practice address: _____ Work Tel: _____

Work Fax: _____
Postcode: _____

Please use 150 words to describe your independent practice. Please remember, **one** entry per person or practice. If you use more than 150 words we will have to précis your entry. PLEASE WRITE CLEARLY.

(For full members only)

PTO

Appendix II. Extract from Local Hospital Policy for Labour

4.4 Assessment of Labour Progress

Vaginal examination is performed 2 – 4 hourly in labour as indicated. Problems are more likely to arise from too few examinations than from too many.

4 hourly during active labour.

2 – 4 hourly if syntocinon augmentation is used.

2 hourly if cervix > 7 cm dilated.

1 hourly if cervix > 9 cm dilated.

If the midwife feels that there is any suspicion of dysfunctional labour in a primip, 2 hourly examinations are recommended as early intervention may improve the normal delivery rate.

4.5 Ambulation and position in labour

This is encouraged on the woman's request. The supine position is the one to be actively discouraged: this is particularly important after epidural anaesthesia.

4.6 Aminotomy

This is encouraged in established labour provided the woman agrees after full explanation and the head is engaged to enable the midwife to see the colour of the amniotic fluid. It is indicated if there is a suspicious CTG (beware of cord presentation) and prior to insertion of an epidural, when a fetal scalp electrode is recommended.

If vaginal bleeding occurs immediately after A.R.M. in association with a sustained fetal bradycardia consider the diagnosis of vasa praevia.

4.7 Nutrition and fluid balance

Eating is not recommended during established labour, as gastric emptying is reduced in labour, thus increasing the risk of vomiting and subsequent inhalation of vomit leading to occasionally fatal consequences (Mendelson's Syndrome). Women in established labour are allowed sips of water or may suck ice cubes or Dextrosol. Oral ranitidine 150 mgs is given 6 hourly to all labouring women – this has been well demonstrated to be safe and reduce the volume and acidity of gastric contents.

The bladder should be emptied regularly prior to a V.E. particularly in women who lose their bladder sensation because of epidural analgesia. These women should be offered a bedpan prior to each epidural top up.

4.8 The Second Stage

This is the most hazardous stage of labour for the baby. Maternal observations should be made every 15 minutes. If the blood pressure is 140/90 mmHg or more, the SHO should be informed. The fetal heart should be auscultated during and after each contraction, if CTG is not being used.

Active pushing should normally not exceed 90 minutes for primips and 45 minutes for multipara, the registrar should be informed when approaching these time limits if delivery is not imminent.

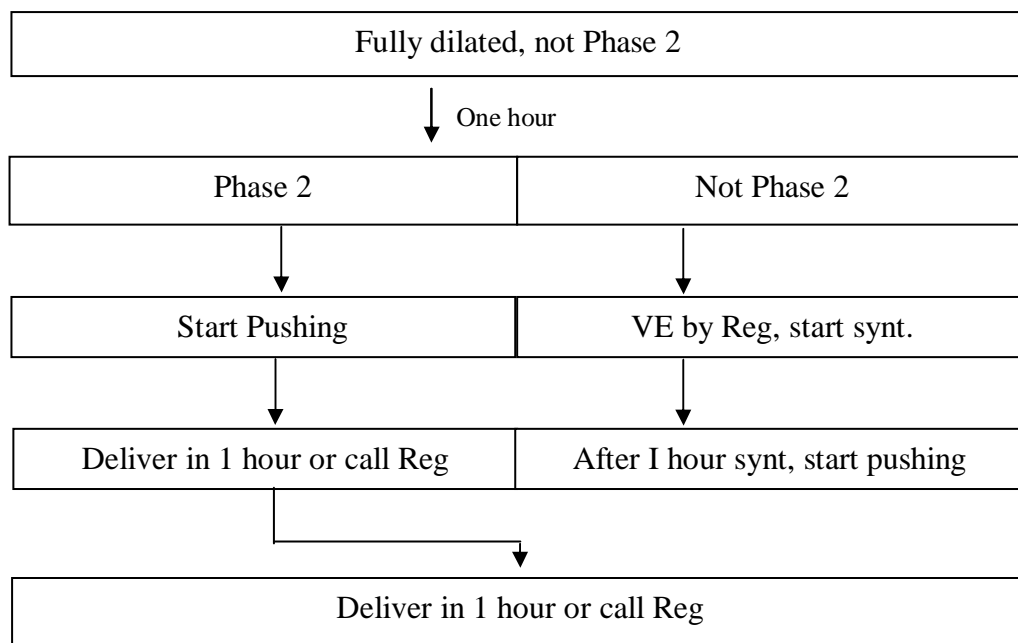
It should be recognised that particularly with epidural analgesia, there are two phases to the Second Stage – phase 1, the early passive phase, when the head is relatively high; and Phase 2, the active pushing phase when there is anal dilatation and the head may be visible.

Maternal position – anything comfortable except supine.

It is well documented that the fetal pH falls rapidly in second stage during active pushing. If a second stage is prolonged for any reason, the registrar should be involved unless the protocol on the following page is adhered to.

Second Stage Protocol for Primips.

This is for Primipara
 + Epidural
 Singleton vertex presentation at term.



Appendix IIa. Extract from Local Hospital Policy for Labour

5. CARE IN NORMAL LABOUR

5.1 General Principles

All women will be welcomed by a member of the team and then introduced to their allocated midwife who in conjunction with the woman will assess and plan for her care whilst on the delivery suite. The plan for care will be documented.

We aim that women should not be left alone in the active phase of labour. A qualified midwife and/or a midwifery/medical student should be allocated to each woman. **The constant presence of a supportive birth companion is one of the most effective forms of care in childbirth (Hoddnet 2000).** The woman's chosen birth partners are encouraged to remain during labour but should leave the delivery room if required to do so. A second support person may be in attendance. All other visitors (including children) are asked to remain outside. Problems with visitors should be brought to the attention of the Senior Midwife at the earliest opportunity. Women are encouraged to mobilise during their labour.

The antenatal record will be reviewed to ascertain whether the woman falls into a "high risk" category. These women will be seen by the registrar on call preferably within 1 hour of admission.

All women will have their baseline observations recorded in the notes as well as abdominal palpation, fetal heart auscultation, assessment of uterine activity and, if appropriate, vaginal examination (VE).

It is well recognized that the diagnosis of labour is one of the most difficult in maternity care; there should be progressive cervical dilatation with regular contractions; when in doubt, discuss with a senior midwife/obstetrician.

The SHO on duty should know all the women on the Delivery Suite unless designated "midwifery care".

5.2 Assessment of Progress & Observations

Accurate observations and record keeping in labour are essential and should be documented both on the partogram and in the text. The partogram should be started when the midwife has diagnosed labour. It is recognised that this is a very difficult diagnosis sometimes, and occasionally we get it wrong. The purpose of the partogram is to aid recognition of failure of normal progress to occur.

Abdominal Examination

The following should be noted & recorded

- Symphyseal-fundal height
- Lie
- Presentation and position
- Station (degree of engagement)
- Contractions - frequency, regularity, strength.

An abdominal examination should always precede a VE at all stages of labour. The finding of a high head (4/5 or more palpable) must be reported to the registrar if labour is deemed to be established.

Recorded Observations

The following should be recorded on the partogram in normal labour

- Temperature 4 hourly
- Pulse Rate Hourly
- BP Hourly
- Fetal heart rate 15-30 minutes during 1st stage.
After every contraction during active 2nd stage
- Contractions Hourly
- Urine on admission

All drugs administered should also be recorded on the self-explanatory partogram and in the written record. Document any allergies.

Vaginal examination (VE)

Women presenting with an antepartum haemorrhage should not have a VE until placenta praevia has been excluded; they should be seen by the registrar, or SHO after consultation with the registrar.

No more than two people should perform VEs at any one assessment. Students performing examinations must be supervised by a qualified midwife/doctor, and the woman must obviously give her consent.

VEs are usually performed 4 hourly in labour. The timing should be tailored to individual needs. There is no indication for amniotomy if labour is progressing normally; it should be reserved for women with abnormal labour progress, or suspicions of fetal compromise (Fraser et al, 1997).

5.3 Nutrition & Fluid Balance

Historically, fasting in labour has been encouraged in order to (theoretically) reduce the risk of Mendelson's Syndrome. However, there is no evidence that there is delay in gastric emptying in low risk normal labour (Broach & Newton, 1988), and fasting can lead to dehydration and acidosis; ventouse delivery due to maternal exhaustion may be decreased if women eat in early labour (Frye, 1994). Women who are low risk may eat in labour, but high fat content foods should be avoided as fat delays gastric emptying (Scrutton et al, 1999).

If a woman needs more than 1 in/out catheter, an indwelling Foley should be inserted. If a labour has been particularly prolonged or there has been a complicated instrumental delivery the catheter should remain in place for approximately 12 hours.

5.4 The Second Stage

This is the most hazardous stage of labour for the baby. The fetal heart should be auscultated during if possible, and certainly after each contraction if a CTG is not being used.

Active phase pushing should normally not exceed 90 minutes for primips and 45 minutes for multips: the registrar should be informed when approaching these time limits if delivery is not imminent.

It should be recognised that particularly with epidural analgesia, there are two phases to the Second Stage - Phase 1, the early/passive stage, when the head is still relatively high; and Phase 2, the active/pushing stage, when there is anal dilatation and the head may be visible with contractions.

Maternal position may be anything comfortable except supine.

It is well documented that the fetal pH falls rapidly in the second stage during active pushing. If a second stage is prolonged for any reason, the registrar should be involved unless the protocol below is adhered to.

Personnel directly involved in the delivery should wear a plastic apron or gown, glasses and gloves unless time prohibits this. All staff should be familiar with the Trust Infection Control policy on spills. There is a particular responsibility on trained staff in delivery suites not only to observe safe practice but to supervise both midwifery and medical students for their own safety as well as for training.

Appendix III. Summary of Mattie's Notes on Labour

Phoned call from client informing Mattie that the woman's membranes had ruptured, discussion on quality and quantity of contraction..

Further phone call 4 hr later, report on contraction, they are now regular, decision made to visit the woman..

Arrival -10.30 description of sounds the woman is making, Mattie gives advice on breathing

Woman becoming aware of pressure on symphysis pubis

11.30 describes sounds - pushy with contractions - position, relaxation and vocalisation with contractions.

Not always pushy - very strong contractions - vocalisation oooffs.

12.00 position out of bath, kneeling on floor, bowel feelings.
Breathing

12.30 Anal pouting, not pushing, bowel movements with contractions

12.45 Position change, partner involvement helping with position - perineum bulging with contractions.

13.10 Back to kneeling

13.17 Good pushing noises

13.33 Back to squat and starting to push

13.53 Vertex visible at height of contraction - pushing well

14.00 Slowly progressing

14.10 Slowly progressing

14.16 Vertex advancing

14.25 Vertex continues to advance slowly

14.55 Nearly crowning

14.58 Baby born with explosive last push.

Appendix IV. Question prompts for Interview with Independent Midwives.

1. Length of time a midwife
2. Type of training.
3. Length of time an Independent Midwife.
4. Decision to become independent.
5. Number of years independent
6. Assessing progress of labour
7. Use of vaginal examinations
8. Woman's part in access progress
9. Conflicts
10. Partograms
11. Effects of medical model
12. Intuition

Appendix V. Consent form for Interviews and Notes

Consent form for Interviews and Notes.

Title of Investigation: An Exploration into the Issues Surrounding the Progress of Labour: An Independent Midwife's Perspective.

Name of Participant:

1. I have read the information sheet on the research in which I have been asked to participate and have been given a copy to keep. I have had the opportunity to discuss the details and ask questions about this information.
2. The Investigator has explained the nature and purpose of the research and I believe that I understand what is being proposed.
3. I understand that my personal involvement and my particular data from the interviews will remain strictly confidential. Only researchers involved in the investigation will have access.
4. I have been informed about what the data collected in this investigation will be used for, to whom it may be disclosed, and how long it will be retained.
5. I have received satisfactory answers to all of my questions.
6. I understand that South Bank Ethics University Committee has accepted the proposal for this study.

I hereby fully and freely consent to participate in the study, which has been fully explained to me. I understand that I am free to withdraw from the study at any time, without giving a reason for withdrawing.

Participant's Name:(Block Capitals)

Participant's Name: Signature

As the investigator responsible for this investigation I confirm that I have explained to the participant named above the nature and purpose of the research to be undertaken.

Investigator's Name: Clare Winter.

Investigator's Signature:

Appendix VI. Letter to consent to interview

St. Barts School of Nursing and Midwifery
City University
Philpot Street
London E1 2EA

Dear

I would like to ask your consent to be interviewed for a piece of research which hopes to exploration into the issues that surrounding the progress of labour from an Independent Midwife's perspective. The purpose of this study is to complete MSc in Midwifery at South Bank University. The aims of the dissertations are to explore the ways the progress of labour is assessed and identify what types of knowledge Independent midwives use. I have confined my selection of interviewees to the London area because of ease of travelling.

The interview will be tape recorded and notes may be jotted down while the interview is in progress. Should you at any time which to terminate the interview, you will be at liberty to switch the machine off. The interview is to be unstructured nature and it is expected to last up to one hour, you are free to give as much or as little information as you would like. The interview is to take place at your convenience and to the location that is most suitable to you, you are welcome to have someone with you if you choose.

The information on the tapes will be confidential and you will be given a codename within the text of the dissertation so that your identity is protected the information on the tapes will be transcribed so that your contribution can be analysed. Only my supervisor and myself will have access to the raw data and it is anticipated that the tapes will be destroyed 6 months after the completion of the study.

I would also like to again access to one set of your notes to see an example of how you record labour. Once again, the information you provide will be strictly confidential; there is no need for me to know any personal details about your client. My interest lies solely in exploring midwifery knowledge.

After having transcribed and analysed the interviews, I would like show you any model I may have developed from the information, to see if you feel it is a true representation of what you have shared with me.

Should you want to find out any more information about the study you are welcome to contact me at City University Tel: 020 7040 5867 or my dissertation supervisor Mary McNabb at South Bank University Tel: 020 7815 8074. Should any issues of practice become evident Jo Naylor, a Supervisor of Midwives has agreed to be available for us. She is at City University Tel: 020 7040

I shall be contacting after two weeks to ask you if you are will to participate. If you are happy to be involved, we can arrange an interview time to suit you.

Yours sincerely

Clare Winter

Appendix VII. Example of coding.

Extract from Maggie's interview to demonstrate the coding process used for all interviews.

So um, is, this whole project that I'm doing is about how basically it is how midwives assess the progress of Labour, but I've selected to look independent midwives. So are you able to tell me how, how do you assess the progress of Labour?

Um, I suppose, I'm not, one of the things that goes into the process is your knowledge ^{Interaction of factors} ^{Knowledge of Woman} ^{Belief}
of the woman. ^{Knowledge of Woman} **Right.** Um, though the fact that you've, you've got to know this woman
^{Quality} ^{Behaviour} ^{Communication Quality}
very well and know how she reacts to things and, and you talk to her quite a lot
^{Timing} ^{Event} ^{Belief} ^{Influence}
prior to going to Labour, I think that, that can have an impact on it. So for instant when
^{Partnership} ^{Communication} ^{Partnership Knowledge}
a woman, or her partner phone up and they say, you know, they think labour's
^{Quality Sound} ^{Partnership in relationship}
started, often just by talking to her over the phone, you can get some sort of idea
^{Condition} ^{Process} ^{Change Progress} ^{Communication}
whether it's just early Labour, or whether things are moving on a bit, just by talking to
^{Sound} ^{Response Process} ^{Participation} ^{Clarify}
her and sort of listening to the way she's reacting and asking her questions about what
^{Sensations} ^{Informal} ^{Ambiguous Assessment} ^{Personal opinion Component}
things feel like. And this is all very, it all sounds very vague, but I think it is one of the
^{Practice} ^{Justification Relationship Partnership Trust} ^{Uncertain}
things that you do because you've got to know this person. Um, if I'm in doubt, then,
^{Need Available} ^{Clinical decision} ^{Belief} ^{Multifactorial}
or if the woman is wanting me, you know, then I will go out. Again, I suppose one of
^{Personal Practice Judgement} ^{Formal Assessment} ^{Justification}
the things I try not to do is to, to do vaginal examinations. Because especially with
^{Condition} ^{Rationale} ^{Performance Expectation}
women who were having the first baby, because it's sort of, in their mind it sets the
^{Timing} ^{Personal Expectations} ^{Consistent} ^{Disruptive}
clock ticking, and in mine (laughing). And it's, it is always seems so destructive somehow. Um.

Um, just to go back, you said an interesting thing, by your knowledge of the woman, helps you and then you also said when you speak to her, you asked her what she's feeling. What is it about your knowledge of the woman that gives you a sense of the progress than?

Belief
I suppose it's how, how she discusses things how she, she sounds, if she's sounding
Attitude Behaviour Verbal Sound
Familiar Behaviour know Woman Behaviour
the way she's been sounding for the last few weeks, you know, are we chatting and
Behaviour Know Woman Familiar Change behaviour
laughing and is it all completely the way it normally is. Or does she sounds different
Change sound Focus Self Aware
about things, does she sounds more, um, more sort of involved in what is happening to
Change Behaviour Belief
her rather than engaging in the conversation, I suppose that one of the things. Um, I
occasional Sense Emotions Fears Style of care Timing
think sometimes you know, you pick up anxieties that women have antenatally, um,
Opportunity Know woman Quality Fears Interpret
and so you might get to know something that she feels anxious about, (I mean that may
Communication Belief Attitude
come up in discussion. And so I suppose what I'm saying is, if the woman sort of
Quality Communicating Marker
talking to me quite happily, although she may be saying that she's been having
Marker Quantity Attitude
contractions every five or ten minutes or something. If she's quite chirpy, or chatty and
Clarify Communicate Partnership Value Explore
I say, well what have you been doing, what's been happening and she's been pottering
Behaviour Guideline Sense Clinical judgement
around doing things quite normally and so forth, then it generally feels to me that
Clinical judgement
things are quite early on. Um, and usually she's quite happy about that.